

In the Matter of: )  
 )  
Application for Certification ) Docket No.  
for the Palomar Energy Project ) 01-AFC-24  
by Sempra Energy Resources )  
 )

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBERS PRESENT

John L. Geesman, Presiding Member

HEARING OFFICER AND ADVISORS PRESENT

Susan Gefter, Hearing Officer

Rick Buckingham, Advisor to Chairman Keese

STAFF and CONSULTANTS PRESENT

Paul A. Kramer, Jr., Staff Counsel

Bob Eller, Project Manager

Matthew S. Layton

Richard Latteri

John S. Kessler, Principal  
Kessler and Associates, LLC

James L. Schoonmaker, Principal  
Pacific Group Electric Power, LLC

Brewster Birdsall, Senior Associate  
Aspen Environmental Group

PUBLIC ADVISER

Robertta Mendonca

APPLICANT

Joseph H. Rowley, Vice President  
Taylor O. Miller, Attorney  
Raymond P. Kelly, Permitting Manager  
Michael R. Niggli  
Semptra Energy

Sara J. Head, Manager  
ENSR International

Howard W. Balentine, Senior Program Manager  
Steve L. Heisler, Senior Program Manager  
ENSR

INTERVENORS

William Powers, Chair  
Border Power Plant Working Group

Cory J. Briggs, Attorney  
Briggs Law Corporation  
on behalf of William Powers

ALSO PRESENT

Lori Holt Pfeiler, Mayor  
City of Escondido

Scott Blaising, Attorney  
Braun & Associates, P.C.  
Special Counsel to City of Escondido

Frank Lorey, Planning Commissioner  
John E. Hoagland, Utilities Manager  
City of Escondido

Michael R. Lake, Assistant Director  
Daniel A. Speer, Senior Air Pollution Control  
Engineer  
Ralph DeSiena, Air Pollution Meteorologist  
Air Pollution Control District  
County of San Diego

N. Nirmala Khandan, Professor  
New Mexico State University

Mark Rodriguez  
Quails Hills

Erin Massey, Staff Writer  
North County Times

Dan Perkins  
Sierra Club San Diego Chapter

Gary Anderson

Shawn Delargy

Steve LaRusso

Greg Morill

## I N D E X

	Page
Proceedings	1
Opening Remarks	1
Presiding Member Geesman	1
Introductions	1
Background	5
Motions/Objections	6
Exhibits 73, 75, 77, 78 and 79 removed	12
Exhibit 39 ID and received	20/21
Exhibit 23 removed	24
Topics	26
Soil and Water Resources	26
Applicant testimony by declaration	26
Exhibits	26/27, 31
CEC Staff testimony by declaration	50
Exhibits	50
Water Quality	27
Applicant testimony by declaration	27
Exhibits	27/29
Water Supply	32
Applicant witness J. Rowley	32
Direct Examination by Mr. Miller	33
Exhibits	35
Applicant witness J. Hoagland	42
Direct Examination by Mr. Miller	43
Exhibits	44
CEC Staff witnesses J. Kessler, R. Latteri and J. Schoonmaker	50
Direct Examination by Mr. Kramer	51
Exhibits	53
Questions by Committee	65

## I N D E X

	Page
Topics - continued	
Soil and Water Resources - continued	
Cross-Examination by Mr. Briggs	71
Exhibit 111	86
Intervenor witness W. Powers	111
Direct Examination by Mr. Briggs	111
Exhibits	112
Exhibit 112	123
Cross-Examination by Mr. Miller	146
Cross-Examination by Mr. Kramer	147
Rebuttal	151
Applicant witness J. Rowley	152
Direct Examination by Mr. Miller	152
Voir Dire by Mr. Briggs	169
CEC Staff witness R.Latteri	
Redirect Examination by Mr. Kramer	164
Exhibits	183, 181
	182, 184, 186
Applicant witness S. Head, S. Heisler and H. Balentine	
Direct Examination by Mr. Miller	209
CEC Staff witness B. Birdsall, M. Layton	
Direct Examination by Mr. Kramer	243
Cross Examination by Mr. Briggs	262
Intervenor witness N. Khandan	
Direct Examination by Mr. Briggs	279
Cross Examination by Mr. Miller	281
Exhibits	281
Intervenor witness W. Powers	
Direct Examination by Mr. Briggs	283
Cross Examination by Mr. Blaising	293
Rebuttal witness Dr. Heisler	
Direct Examination by Mr. Miller	297
Exhibits	298
Adjournment	298
Reporter's Certificate	299

## P R O C E E D I N G S

1:02 p.m.

PRESIDING MEMBER GEESMAN: Good

afternoon. I'm John Geesman, a member of the California Energy Commission and the Presiding Member of this Committee. To my right is Rick Buckingham, who is the Staff Advisor to Chairman Keese, who is the Second Member of this Committee and was unable to attend today, himself.

To my left is Susan Gefter, the Hearing Officer for the Committee, who will actually be conducting today's hearing.

This is a continuation of the Committee's evidentiary hearings on the Semptra Energy application for certification of the Palomar Energy project. Today we will hear testimony on contested issues and other topics requiring clarification, as identified in our hearing order of March 20th.

These proceedings are being transcribed by our reporter. The official transcript will be posted on the Commission's website.

Before we get to the actual hearing, itself, and before I turn this over to Ms. Gefter, why don't we go through introductions. Mr.

1 Miller.

2 MR. MILLER: Thank you. I'm Taylor  
3 Miller, counsel for the applicant. To my right is  
4 Mr. Joe Rowley, Semptra Energy Resources. And  
5 we'll have additional witnesses and perhaps they  
6 should be introduced --

7 MR. HOAGLAND: I'm John Hoagland,  
8 Utilities Manager for the City of Escondido.

9 MR. BLAISING: I'm Scott Blaising,  
10 outside counsel for the City of Escondido.

11 MR. KRAMER: I'm Paul Kramer, Staff  
12 Counsel to the staff in this matter. And with me  
13 is Bob Eller, the Project Manager.

14 PRESIDING MEMBER GEESMAN: And the  
15 intervenors.

16 MR. BRIGGS: I'm Cory Briggs, attorney  
17 for intervenor Bill Powers.

18 MR. POWERS: Bill Powers, Chair of the  
19 Border Power Plant Working Group, intervenor.

20 PRESIDING MEMBER GEESMAN: Very well.  
21 Ms. Gefter, why don't we turn it over to you.

22 HEARING OFFICER GEFTER: We need to go  
23 off the record for a minute because our reporter's  
24 mikes are not working.

25 PRESIDING MEMBER GEESMAN: Okay.

1 (Off the record.)

2 PRESIDING MEMBER GEESMAN: We have two  
3 other intervenors in the proceeding who are not  
4 present today. Any representative from CURE here?  
5 How about Cabrillo, LLC? Duly noted.

6 Ms. Gefter.

7 HEARING OFFICER GEFTER: Is there a  
8 representative here from the San Diego Air  
9 Pollution Control District? Do we expect a  
10 representative from the Air Pollution Control  
11 District here? Yes, just come up and tell us your  
12 name for now.

13 MR. LAKE: Michael Lake, the Assistant  
14 Director of the Air Pollution Control District.  
15 Also Dan Speer.

16 HEARING OFFICER GEFTER: Thank you. If  
17 you'll be patient with us we'll get to the air  
18 quality topic this afternoon. We're not going to  
19 go first with air quality, though.

20 All right. Roberta Mendonca is our  
21 Public Adviser. I don't see her here right now.  
22 We'll note for the record when she arrives.

23 And we also have the Mayor of Escondido  
24 present, Lori Pfeiler. If you would like to come  
25 and address us for a moment, we welcome having you



1 here.

2 MAYOR PFEILER: Thank you very much.

3 I'm pleased to be able to welcome you here to  
4 Escondido again to talk about this very important  
5 project. It is an important project to the City  
6 of Escondido. It's a project that has been  
7 discussed not only as a power plant, but for over  
8 20 years has had a lot of public discussion, and  
9 some of it not very pleasant public discussion.

10 So, very pleased to let you know that as  
11 this project has moved forward through our review  
12 process, it has a great deal of public support.  
13 We recognize it is a power plant that will be in  
14 the City of Escondido and we will also have an  
15 industrial park as part of that which will provide  
16 a great many jobs and reliable energy source for  
17 the residents for the City of Escondido, and  
18 ultimately the San Diego region, as a whole.

19 We'd sure be happy to answer any  
20 questions that you might have about the City  
21 process and our expectations, but I'll look  
22 forward to your process. Thank you.

23 PRESIDING MEMBER GEESMAN: Thank you,  
24 Mayor Pfeiler. Nice to see you again.

25 HEARING OFFICER GEFTER: Are there any

1 representatives of local community organizations  
2 here today? Yes, please come forward.

3 MR. RODRIGUEZ: Mark Rodriguez, Quails  
4 Hills, concerned neighbors.

5 HEARING OFFICER GEFTER: Thank you. Is  
6 the media here today? Let us know who you are.

7 MS. MASSEY: Good afternoon; I'm Erin  
8 Massey; I'm with The North County Times.

9 HEARING OFFICER GEFTER: Thank you.  
10 We're going to offer a little background for where  
11 we are today, and then we'll move on with the  
12 hearing.

13 On April 8th the Committee completed  
14 hearings on the uncontested topics on this matter,  
15 and we closed the record on those topics except  
16 for the topic of traffic. And we asked the City  
17 of Escondido to join with the staff and the  
18 applicant in discussing with us appropriate  
19 measures to mitigate the impacts of Palomar-  
20 related construction traffic at the intersections  
21 of Citracado and Country Club, and also at  
22 Citracado and Vineyard.

23 And we will conduct that discussion  
24 following the topic of land use later in the  
25 hearing, so we're not going to do that right now.

1           Today we plan to take evidence on the  
2           contested issues related to water resources,  
3           alternatives, air quality, public health and  
4           visual resources.

5           We'll also hear testimony on the topics  
6           of land use and biological resources to confirm  
7           that the Palomar project is consistent with the  
8           ERTC specific plan.

9           We've scheduled time this evening  
10          beginning at 6:30 for public comment, and we hope  
11          that interested members of the community will join  
12          us at that time to express their views. If time  
13          permits this evening, also we'll try to complete  
14          all of the topics scheduled for today except for  
15          land use and biology, which we expect will be  
16          heard tomorrow morning.

17          At this time in order to move things  
18          along we'll entertain motions from the parties.  
19          We note that counsel for the City of Escondido,  
20          Mr. Blaising, has requested the opportunity to  
21          object to questions posed to the City's witnesses,  
22          if warranted, and also to cross-examine other  
23          parties' witnesses on issues related to the City  
24          of Escondido. And we will allow Mr. Blaising to  
25          proceed in that matter.

1           We also understand that there may be  
2           some other motions regarding exhibits that the  
3           parties have been discussing and this is the time  
4           for you to bring that to our attention.

5           Mr. Miller.

6           MR. MILLER: I think perhaps Mr.  
7           Blaising might lead off on this. He's got some  
8           specific objections that subject to an interchange  
9           with Mr. Briggs. Perhaps it would be more  
10          appropriate for him to begin.

11          HEARING OFFICER GEFTER: Okay. And we  
12          are aware of those conversations and discussions.  
13          Mr. Blaising, on behalf of the City of Escondido,  
14          may go forward then.

15          MR. BLAISING: We've had an opportunity  
16          to review the exhibits, and exhibit 73, 75, 76,  
17          77, 78, 79 and 83, we would object to those as  
18          being admissible. We don't see, number one, that  
19          they are established in the testimony by either  
20          the intervenor or the applicant, in terms of where  
21          in the testimony it's cited.

22          Beyond that, as to the substance of  
23          them, we believe that if they don't raise any  
24          issues, even if they were proved true as a fact,  
25          they don't prove an issue or fact, rather, that's

1 relevant to an issue of relevance in this  
2 proceeding.

3 It's my understanding in discussions  
4 with Mr. Briggs that the primary focus of these  
5 exhibits, with the exception of exhibit 76,  
6 relates to the cost of recycled water services  
7 agreement. In the course of conversation we were  
8 moving to a point of actually agreeing that, in  
9 fact, those exhibits could be withdrawn, if, in  
10 fact, we would offer the recycled water services  
11 agreement as an exhibit.

12 We would like to again present that as  
13 an offer to the Committee. We would be willing, I  
14 believe, on behalf of applicant, to submit the  
15 executed recycled water services agreement. It  
16 speaks for itself concerning the terms and  
17 conditions, the prices associated with the cost of  
18 recycled water.

19 HEARING OFFICER GEFTER: Before we  
20 continue, Mr. Blaising, could you repeat the  
21 exhibits that you're challenging?

22 MR. BLAISING: Yes. Exhibits 73, 75,  
23 77, 78, 79 and 83. Those exhibits we would  
24 suggest that the introduction of the recycled  
25 water services agreement would act as a substitute

1 for those exhibits.

2 And with respect to exhibit 76 we object  
3 to that on different grounds, but on the ground  
4 that it's pointing to issues that aren't of issue  
5 before this Commission or Committee.

6 HEARING OFFICER GEFTER: And would the  
7 recycled water agreement that you're referring to,  
8 is that a public document?

9 MR. BLAISING: Yes, it is.

10 MR. BRIGGS: I'm sorry, what was the  
11 question? Is that agreement what?

12 HEARING OFFICER GEFTER: Is it a public  
13 document. He answered yes.

14 All right, at this point, Mr. Briggs,  
15 would you like to respond to Mr. Blaising's  
16 comments?

17 MR. BRIGGS: Sure. We don't have a  
18 problem having exhibits 73, 75, 77, 78 and 79  
19 removed from the record. Exhibit 76 is an NPDES  
20 permit issued to the HARF. It includes  
21 requirements that HARF may have to meet, depending  
22 on whether there are discharges of sewer to  
23 Escondido Creek. So it's relevant to the LORS  
24 issue.

25 As for exhibit 83, the Bureau of

1 Reclamation document, we think that document needs  
2 to be here, as well, because not only does it go  
3 to the issue of price, but there are some  
4 references in testimony, some of the prefiled  
5 testimony. We think this document may be relevant  
6 in terms of cross-examination.

7 MR. KRAMER: Point of clarification.  
8 Number 76 is the cease and desist order, right?  
9 Not the NPDES permit?

10 MR. BRIGGS: 75 on the list I have is  
11 the cease and desist order.

12 MR. KRAMER: I thought you were talking  
13 about --

14 MR. BRIGGS: I was talking about order  
15 number 9810.

16 HEARING OFFICER GEFTER: That's exhibit  
17 76 you're referring to?

18 MR. BRIGGS: If I said --

19 PRESIDING MEMBER GEESMAN: I think Cory  
20 said it right.

21 HEARING OFFICER GEFTER: Yeah, he said  
22 76.

23 MR. KRAMER: Okay, my problem is on the  
24 copies of exhibits that I was given it's numbered  
25 76. So I guess -- okay, then my copies were

1       numbered erroneously. Thank you.

2               MR. BRIGGS: As long as we're talking  
3       about order number 9810, I apologize. The wrong  
4       number came from my office.

5               HEARING OFFICER GEFTER: I'm sorry?

6               MR. BRIGGS: If I'm responsible for the  
7       wrong number on the exhibits, my apologies.

8               HEARING OFFICER GEFTER: In my list of  
9       exhibits I have it as exhibit 76.

10              MR. BRIGGS: Okay, I'm talking about  
11       exhibit 76, order number --

12              HEARING OFFICER GEFTER: Yes.

13              MR. BRIGGS: -- 9810 NPDES permit.

14              HEARING OFFICER GEFTER: Right.

15              MR. BRIGGS: That one should stay. The  
16       rest can go with the exception of the qualified  
17       release of exhibit 83. If we can use it for  
18       cross-examination purposes that would be fine.

19              HEARING OFFICER GEFTER: So you want to  
20       continue to offer 83 for cross-examination  
21       purposes?

22              MR. BRIGGS: That's correct. It may  
23       prove not to be necessary, at which point I'm  
24       happy to say get rid of it. But at this point, I  
25       think it's premature to get rid of it.



1 HEARING OFFICER GEFTER: And that looks  
2 like it's also a public record, Mr. Briggs?

3 MR. BRIGGS: Yes.

4 HEARING OFFICER GEFTER: It is. Okay,  
5 with no objection from the other parties, and with  
6 Mr. Briggs' agreement, exhibits 73, 75, 77, 78 and  
7 79 are now removed from the record.

8 MR. MILLER: Can I have a moment?

9 HEARING OFFICER GEFTER: Mr. Miller.

10 MR. KRAMER: Could you just repeat the  
11 numbers, 73, --

12 HEARING OFFICER GEFTER: 73, 75, 77, 78  
13 and 79.

14 MR. KRAMER: Okay.

15 HEARING OFFICER GEFTER: Yes, Mr.  
16 Miller.

17 MR. MILLER: I'd just like to make one  
18 point just for clarification. On exhibit number  
19 77, which was the state water -- review, loans to  
20 the City that might relate to the HARRF, if that's  
21 going to be withdrawn I guess I'd want it  
22 conferred that the intervenor not contend that  
23 that's an issue any longer --

24 MR. BRIGGS: What is that?

25 MR. MILLER: That HARRF -- that the loan

1 conditions from the Water Board to the HARRF are  
2 not an issue. If it's taken --

3 MR. BRIGGS: Keep going. I didn't mean  
4 to cut you off. Go ahead and finish.

5 MR. MILLER: I just wanted to clarify  
6 that if this exhibit is out then that issue is  
7 also not going to be an issue that you'll be --

8 HEARING OFFICER GEFTER: Let's go off  
9 the record. We're having trouble with your  
10 microphone, Mr. Miller.

11 (Off the record.)

12 HEARING OFFICER GEFTER: Back on the  
13 record.

14 MR. BRIGGS: From where I'm sitting  
15 sometimes it's difficult to hear Mr. Miller and  
16 Ms. Gefter. I don't know if it's just where I am  
17 in relation to a speaker, but unless you're right  
18 on the mike, your actual voice from where you're  
19 sitting sort of drowns out what I'm hearing.

20 MR. MILLER: Okay, it's like a stadium  
21 or --

22 MR. BRIGGS: It's -- so if I look at you  
23 with that dull stare, it's because I didn't hear  
24 you.

25 I think that's not okay. And the reason

1 is because that loan agreement does state certain  
2 conditions that Escondido would have to comply  
3 with. So, -- and we do intend to discuss those  
4 conditions later today.

5 So it may be that we deal with this  
6 document, what I suggested for exhibit 83 and that  
7 is, leave it. And if it turns out we don't get to  
8 that issue, we're more than happy to have it  
9 removed.

10 MR. MILLER: And I would anticipate Mr.  
11 Blaising would object to that line of questioning  
12 when the time comes. That would be my --

13 HEARING OFFICER GEFTER: Okay, so now  
14 you're suggesting that you're going to keep  
15 exhibit 77 in the record?

16 MR. BRIGGS: Only because Mr. Miller  
17 raised a question about some of the conditions  
18 that are described in that loan document. We do  
19 intend to talk about those sorts of conditions if  
20 the issue comes up --

21 HEARING OFFICER GEFTER: Is that loan  
22 document a public document?

23 MR. BRIGGS: It should be; it's a State  
24 Water Resources Control Board document.

25 HEARING OFFICER GEFTER: Okay. For now

1 we'll leave it in the record, and then we can see  
2 where that goes later.

3 All right, now with respect to exhibit  
4 76, which you indicated, Mr. Blaising, that you  
5 had other issues with. Mr. Briggs, you expect to  
6 use that document in your cross-examination?

7 MR. BRIGGS: There's a chance that it  
8 will be necessary to refer to that document.

9 HEARING OFFICER GEFTER: Okay. So, at  
10 this point we've dealt with some of those  
11 exhibits. Mr. Blaising, do you have other issues  
12 at this point?

13 MR. BLAISING: Well, I would maybe just  
14 make a comment at this point, and perhaps it's not  
15 something that could be responded to, but I would  
16 ask on the purpose of the documents Mr. Briggs  
17 references LORS.

18 It's my understanding that LORS applies  
19 to the applicant, and the project, itself, and is  
20 not the purpose of that to examine the City's  
21 compliance with existing laws. And so perhaps at  
22 this point I would just suggest that if the  
23 purpose of 76 continues to be whether the City is  
24 in compliance with laws, then I would object to  
25 that as being outside the scope of this

1 proceeding.

2 HEARING OFFICER GEFTER: Okay, and if  
3 you would make a motion on that we would grant  
4 that. Because, in fact, we do not have  
5 jurisdiction over the City. Mr. Kramer.

6 MR. KRAMER: I would only point out that  
7 from staff's perspective, to the extent some of  
8 these issues suggest that there is not a reliable  
9 source of water for the project, staff would be  
10 concerned. We don't see it rising to that level,  
11 but that is a possible avenue by which it could be  
12 relevant if that line of thought were developed.

13 MR. BRIGGS: And I would add that  
14 because Palomar is going to be an industrial user  
15 and operating through HARRF as an industrial user,  
16 one of the requirements of any state board  
17 approved industrial user program is that the  
18 discharger agree not to cause or contribute to any  
19 violations that put the facility in violation.

20 So, in that sense it is relevant.

21 HEARING OFFICER GEFTER: Okay. And I  
22 would agree with that particular aspect of it.  
23 So, with all of that said, we'll see where we go  
24 with the testimony.

25 Anything else, Mr. Blaising?

1 MR. BLAISING: No, thank you.

2 HEARING OFFICER GEFTER: Okay. Are  
3 there any other motions or housekeeping matters  
4 that the parties wish to address? Mr. Miller.

5 MR. MILLER: Yes. I would like to  
6 question the admissibility and object to the  
7 admissibility of exhibits that are not referenced  
8 in the prefiled testimony.

9 I have asked during the past week for  
10 clarification purposes that they will be offered  
11 for, and have not gotten a response. And that  
12 would be exhibits 99 and then 103 through 107,  
13 which were largely filed late in the process. And  
14 it's, to us, difficult to prepare for the hearing  
15 if we don't have prefiled testimony that explains  
16 the reason that the exhibits are being offered.

17 HEARING OFFICER GEFTER: Mr. Briggs, do  
18 you have a response?

19 MR. BRIGGS: May I have two more seconds  
20 to respond?

21 HEARING OFFICER GEFTER: Okay. Mr.  
22 Miller, are you saying exhibits 103 through 107?

23 MR. MILLER: Yes.

24 HEARING OFFICER GEFTER: Okay.

25 MR. MILLER: And I believe also exhibit

1 99.

2 MR. BRIGGS: Ms. Gefter.

3 HEARING OFFICER GEFTER: Yes.

4 MR. BRIGGS: Exhibit number 99, we don't  
5 have a problem with that exhibit being removed  
6 from the record.

7 Exhibits 103 through 107 are critical.  
8 The reason they were filed late is because they  
9 are used in relation to rebuttal testimony that  
10 was offered by applicant and staff. And we'll be  
11 relying on those exhibits to help us with cross-  
12 examination.

13 I'd also point out that we got them to  
14 the CEC just as fast as we possibly could, given  
15 that some of them were coming from sources that  
16 were hard to get a hold of.

17 Also exhibit 103 is a CEC document.

18 HEARING OFFICER GEFTER: Which of the  
19 exhibits 103 through 107 are public documents,  
20 public official documents? Aside from 103.

21 MR. BRIGGS: Ms. Gefter, exhibit 103 is;  
22 exhibit 104 is from a trade publication; exhibit  
23 105 is from a Florida water conservation workshop,  
24 so it's probably a quasi-public document.

25 Exhibits 106 and 107 are tech sheets --

1       sorry, exhibit 106 is a tech sheet; exhibit 107 is  
2       from a proceeding of the Cooling Tower Institute.

3               HEARING OFFICER GEFTER:  Okay, well, at  
4       this point we'll leave them in the record -- well,  
5       103 is a public document, it's a CEC document.  So  
6       whether or not it's in the record, we could take  
7       administrative notice of it.

8               Exhibits 104, 105, 106 and 107, we'll  
9       leave them in the record for now, subject to a  
10      motion to strike if you can't connect those  
11      documents to the Palomar project.

12              MR. BRIGGS:  Fair enough.

13              HEARING OFFICER GEFTER:  All right.  
14      Anything else, Mr. Miller?

15              MR. MILLER:  Yes.  I would like to  
16      correct an oversight on our part.  One of the  
17      previously docketed exhibits did not make it to  
18      our list.  It was just one of our two comments on  
19      the FSA that requested changes in conditions.

20              We do have identified as one of our  
21      exhibits, the second of those two letters.  In  
22      fact, you mentioned it at the last hearing, that  
23      was the February 13th letter.

24              There was also another letter dated, I  
25      believe it was February 5th, that related to



1 visual condition request. And if we could  
2 identify that as a new exhibit, we'd appreciate  
3 that.

4 HEARING OFFICER GEFTER: Yes, I know  
5 which exhibit you're talking about. And that one  
6 made suggestions as to revising the visual  
7 resources conditions?

8 MR. MILLER: Correct.

9 HEARING OFFICER GEFTER: Okay. So would  
10 that be exhibit 39?

11 MR. MILLER: That would be -- yes.

12 HEARING OFFICER GEFTER: Okay, --

13 MR. KRAMER: May I ask a question about  
14 that?

15 HEARING OFFICER GEFTER: -- well, you  
16 need to identify that more specifically for the  
17 parties at this moment. Let Mr. Miller finish,  
18 and then we can --

19 (Pause.)

20 MR. KRAMER: If it helps, my question  
21 goes to whether or not it's necessary.

22 HEARING OFFICER GEFTER: Right, there is  
23 that question.

24 MR. KRAMER: Okay.

25 HEARING OFFICER GEFTER: Well, you know,

1       it's whether or not at this point staff actually  
2       incorporated your proposed changes to visual  
3       resources conditions, and then --

4               MR. MILLER:  Yeah.  It was to provide  
5       just a complete record; it was one of our key  
6       documents that we sort of forms the history of the  
7       project, but --

8               HEARING OFFICER GEFTER:  There's no  
9       problem with it being part of the record.

10              MR. KRAMER:  Okay, yeah, I --

11              HEARING OFFICER GEFTER:  I don't think  
12       there's any objection since the proposed  
13       conditions have already been incorporated into  
14       staff's testimony.

15              MR. KRAMER:  Right, in other words  
16       exhibit 51 supersedes that.

17              HEARING OFFICER GEFTER:  Yeah.

18              MR. KRAMER:  For purposes of the design  
19       and condition.  Okay.

20              MR. MILLER:  Right, right.  That's  
21       correct.  It's the letter dated February 5, 2003  
22       from myself to the docket unit, attaching  
23       suggested -- a discussion of the architectural  
24       requirements for the Palomar Energy project.

25              HEARING OFFICER GEFTER:  And that was

1 docketed on February 5th?

2 MR. MILLER: Yes. And I do have copies  
3 here if it should somehow become relevant.

4 And I had one other matter, if I could,  
5 after you're finished with that.

6 HEARING OFFICER GEFTER: Yes.

7 MR. MILLER: With regard to the way we  
8 proceed today, we have, on several topics,  
9 multiple witnesses. And I believe staff does on  
10 some, too.

11 In past cases where there's an  
12 intervenor particular line of questions, it's been  
13 my experience that after the applicant presents  
14 its evidence, which we would like to offer as a  
15 panel, that the cross-examination often covers  
16 items that are then immediately addressed by the  
17 staff in their direct testimony.

18 And so to save time, my suggestion would  
19 be that with regard to water resources issues and  
20 air quality that we take the direct testimony from  
21 the applicant and from staff, and then have cross-  
22 examination on that topic at one time.

23 HEARING OFFICER GEFTER: I tend to  
24 prefer that method because it saves us time. All  
25 the witnesses will have been sworn and will be

1 available to answer the questions based on their  
2 expertise.

3 So we will use panel -- each party can  
4 put together their panel for cross-examination as  
5 we get through the topic.

6 Mr. Briggs?

7 MR. BRIGGS: I think that's fine. The  
8 only question I would have is whether cross-  
9 examination is to be directed to individuals or to  
10 the panel? How will that --

11 HEARING OFFICER GEFTER: You can address  
12 it to an individual, and if that person says that  
13 they don't have that expertise, they could refer  
14 you to the other person who does. So it will work  
15 together.

16 MR. BRIGGS: That's fine.

17 HEARING OFFICER GEFTER: We can do that.

18 MR. MILLER: Sounds good, thank you.

19 HEARING OFFICER GEFTER: I have one  
20 housekeeping matter. Exhibit 88, which is Mr.  
21 Powers' exhibit, is actually the same as exhibit  
22 23, which was the Palomar's response to Bill  
23 Powers' document.

24 And so since the applicant has already  
25 submitted exhibit 23, there's no need for it to be

1 part of the record as exhibit 88. So 88 will be  
2 stricken.

3 MR. MILLER: Okay. We should just point  
4 out that we ultimately determined that after we  
5 had it listed that we didn't need to sponsor it  
6 for any reason, so I believe Mr. Powers' direct  
7 testimony does refer to it, so we would consider  
8 it sponsored by Mr. Powers.

9 HEARING OFFICER GEFTER: Okay, so you  
10 want to delete 23 --

11 MR. MILLER: Yes, I guess that's the  
12 preference.

13 HEARING OFFICER GEFTER: Okay, we'll do  
14 it that way. That's fine. Okay, so exhibit 88  
15 remains; exhibit 23 is deleted. It's the same  
16 document.

17 MR. MILLER: One other, just a purely  
18 housekeeping matter is that when we looked at one  
19 of the earlier iterations of Mr. Powers exhibit  
20 list we noted that there was a number of dates of  
21 docketing that were maybe not quite accurate. And  
22 we forwarded -- did those get corrected or -- just  
23 wanted to let Ms. Gefter know.

24 MR. BRIGGS: Just a request, Taylor,  
25 it's difficult for me to hear. Can you put the

1       mike a little bit --

2               MR. MILLER: I've got it as close as I  
3       can get it.

4               MR. BRIGGS: Okay. What is the  
5       question? I'm sorry.

6               MR. MILLER: I'm sorry, the question was  
7       there were some date errors that we sent to Mr.  
8       Briggs that related to your exhibit, just the  
9       dates things were filed and the dates of the  
10      documents. And I don't know if those corrections  
11      were made or not.

12              MR. BRIGGS: The CEC Public Adviser's  
13      Office did a QA on all the dates. And I presume  
14      that all those corrections were incorporated.

15              MR. MILLER: I didn't get a response, so  
16      I didn't know if it made its way into this list or  
17      not.

18              HEARING OFFICER GEFTER: Okay. This is  
19      something we can discuss later off the record, in  
20      terms of housekeeping.

21              MR. MILLER: All right, fine.

22              HEARING OFFICER GEFTER: Are there any  
23      other procedural motions before we begin today?  
24      Okay.

25              Since the applicant has the burden of

1 proof, we're going to ask the applicant to begin  
2 the presentation. And our first topic is water  
3 resources.

4 The hearing order provides two hours for  
5 Mr. Powers to present testimony on cooling  
6 options, and another hour on air quality impacts.  
7 We will begin with the topic of water resources,  
8 but first we'll ask the applicant to offer  
9 testimony on the issue of water quality, which is  
10 uncontested and should not take up too much time.

11 And then we'll move on to water supply  
12 and cooling options.

13 So we will basically bifurcate the topic  
14 of water resources for that purpose.

15 MR. MILLER: I don't know that we ever  
16 did soil, technically, so we'll start with a  
17 declaration on that.

18 HEARING OFFICER GEFTER: Yeah, we can do  
19 the declaration on soil; and then you can move to  
20 water quality; and then we'll do water supply.

21 MR. MILLER: For the topic of soils we  
22 had submitted prefiled testimony of Sally B, as in  
23 boy, -i-l-o-d, as in David, -e-a-u. And within  
24 that testimony Ms. Bilodeau sponsored AFC section  
25 5.6 and exhibits 2A and 2D, data responses 49

1 through 51.

2 So I would propose that her testimony be  
3 accepted as part of exhibit 35, direct testimony,  
4 and sponsored exhibits be admitted by declaration  
5 and move them into the evidentiary record.

6 HEARING OFFICER GEFTER: Is there any  
7 objection to the exhibits and the testimony  
8 regarding soil resources, soil, as indicated by  
9 Mr. Miller?

10 MR. KRAMER: No.

11 MR. BRIGGS: Not from intervenor.

12 HEARING OFFICER GEFTER: Okay, so the  
13 portion of exhibit 35 related to soils and  
14 exhibits 2A and 2C, the portions related to soils  
15 are received into the record.

16 MR. MILLER: Thank you. Now moving on  
17 to water quality. We have the prefiled testimony  
18 of Jacqueline B, as in boy, -r-e-e-s-e. And I  
19 would propose to admit this testimony by  
20 declaration, as well.

21 And within that testimony Ms. Breese  
22 sponsors section 5.4 of the AFC, appendix G1 and  
23 appendix G2. And also exhibits 2A, data responses  
24 52 through 59; exhibits 2D, responses 49 through  
25 55; exhibit 29, notice of intent to comply with



1 general permit.

2 HEARING OFFICER GEFTER: Any objection  
3 to the offer of those exhibits into the record?

4 MR. KRAMER: None.

5 MR. BRIGGS: Intervenor doesn't object,  
6 but just so the record's clear, Mr. Miller and I  
7 talked about this by e-mail. My understanding is  
8 that the panel that testifies today will be able  
9 to field questions that came up during our e-mail  
10 discussion. So I suspect that will be the case,  
11 in which case I don't have an objection.

12 MR. MILLER: We can see how that  
13 unfolds, I guess. We did have an exchange of e-  
14 mails where Mr. Briggs proposed an interpretation  
15 of Ms. Breese's testimony which I responded to.  
16 And I haven't had any further communication to  
17 indicate to the contrary, so --

18 HEARING OFFICER GEFTER: Is Ms. Breese  
19 here today?

20 MR. MILLER: No, she is not able to be  
21 here. We didn't think she was going to be needed.

22 HEARING OFFICER GEFTER: Is there  
23 someone here who could testify about water quality  
24 issues?

25 MR. MILLER: I guess that depends on the

1 question.

2 HEARING OFFICER GEFTER: We do have Mr.  
3 Hoagland here from the City who could provide us  
4 with information to the extent that --

5 MR. BRIGGS: I think it's going to be  
6 okay given the exchange that we had.

7 HEARING OFFICER GEFTER: At this point  
8 the exhibits referred to by Mr. Miller regarding  
9 water quality are received into the record. I  
10 wanted clarification of appendix G1 and G2 of the  
11 AFC. Those are the will-serve letters from the  
12 City, is that right?

13 MR. MILLER: I believe they are. I know  
14 one of the two is, but I'm not sure if both of  
15 them are. Can we check --

16 HEARING OFFICER GEFTER: I may be wrong,  
17 but I seem to remember an appendix G referring to  
18 a will-serve letter. We can look for that --  
19 proceed.

20 MR. MILLER: Okay, we'll double check  
21 that.

22 HEARING OFFICER GEFTER: And then also  
23 exhibit 29 indicated is a permit compliance  
24 document?

25 MR. MILLER: Yes, that was just a notice

1 of intention to proceed with -- ERTC actually, I  
2 guess, with regard to storm water and pollution  
3 control.

4 HEARING OFFICER GEFTER: Oh, that's  
5 storm water and pollution control, okay. So, in  
6 terms of the industrial discharge, or the  
7 industrial user permit, that's a separate  
8 document?

9 MR. MILLER: I'm sorry, I was learning  
10 what G1 and G2 were while you were asking your  
11 question.

12 HEARING OFFICER GEFTER: Okay, what are  
13 G1 and G2?

14 MR. MILLER: They are not will-serve  
15 letters. We'll get to that under water supply.

16 HEARING OFFICER GEFTER: Okay.

17 MR. MILLER: They are the excerpts from  
18 the application for the industrial user discharge  
19 permit.

20 HEARING OFFICER GEFTER: That was my  
21 second question, okay.

22 MR. MILLER: That was G1. And G2 is  
23 Palomar Energy drainage connection points exhibit.  
24 So it had to do with storm water.

25 HEARING OFFICER GEFTER: Okay. Well, if

1       there's somebody here, and I guess perhaps Mr.  
2       Hoagland from the City could speak to that.  
3       Apparently Mr. Powers has raised a question  
4       concerning discharge and compliance with the  
5       industrial user permit. So we will probably have  
6       to ask about that at some point.

7               Mr. Powers or Mr. Briggs, are you  
8       planning to put on evidence regarding discharge?

9               MR. BRIGGS: Yes.

10              HEARING OFFICER GEFTER: Okay. And  
11       you're familiar with appendices G1 and G2 from the  
12       AFC?

13              MR. BRIGGS: From the AFC?

14              HEARING OFFICER GEFTER: Um-hum.

15              MR. BRIGGS: Yes.

16              HEARING OFFICER GEFTER: All right.

17              MR. MILLER: So I would move Ms.  
18       Breese's prefiled testimony, then, as part of  
19       exhibit 35, as well as her exhibits.

20              HEARING OFFICER GEFTER: Okay. I think  
21       we've already received those. Okay.

22              With respect to soil you didn't mention  
23       the AFC exhibit 1, so we're getting --

24              MR. MILLER: Oh, I'm sorry.

25              HEARING OFFICER GEFTER: Yeah, so we'll

1 receive that portion of exhibit 1 regarding soil,  
2 as well.

3 MR. MILLER: Right.

4 HEARING OFFICER GEFTER: At the end of  
5 the hearings we'll go through and just move the  
6 entire exhibit 1 into the record, and all the  
7 other, where we have portions of exhibits, we'll  
8 just make a final offer of the entire exhibit, and  
9 then we will be --

10 MR. MILLER: Just in case.

11 HEARING OFFICER GEFTER: Right. All  
12 right, so you may proceed.

13 MR. MILLER: Okay. Let me switch books.  
14 Okay, now I'm moving to water and water supply  
15 part of water resources. We have two witnesses.  
16 The first is Mr. Joe H. Rowley, and I'll ask him  
17 to be sworn.

18 HEARING OFFICER GEFTER: Would the  
19 reporter please swear the witness.  
20 Whereupon,

21 JOSEPH H. ROWLEY  
22 was called as a witness herein, and after first  
23 having been duly sworn, was examined and testified  
24 as follows:

25 HEARING OFFICER GEFTER: Also, what

1 we're going to do with the witnesses, we'll ask  
2 them to sit at the table next to the party that is  
3 sponsoring them since our microphones are set up  
4 here. So, Mr. Rowley, you can sit where you are.

5 (Pause.)

6 HEARING OFFICER GEFTER: While we're  
7 pending, I'll go off the record for a minute.

8 (Off the record.)

9 HEARING OFFICER GEFTER: Back on the  
10 record. I want to note for the record that the  
11 Commission's Public Adviser, Roberta Mendonca, is  
12 here. And if any members of the public have any  
13 questions or wish to address us, please see her.  
14 She's standing in the back there. Thank you.

15 Okay, Mr. Miller, are you ready?

16 MR. MILLER: Yes, thank you. I'll  
17 proceed now with the direct questioning of Mr.  
18 Rowley.

19 DIRECT EXAMINATION

20 BY MR. MILLER:

21 Q Could you please state your name and  
22 occupation?

23 A Joseph H. Rowley, Vice President of  
24 Asset Management for Sempra Energy Resources.

25 Q And could you describe your educational

1 background and your occupational experience  
2 related to your testimony in this proceeding?

3 A I did describe that at the last  
4 hearings. My background is power generation and  
5 transmission. I spent 23 years in development,  
6 permitting, construction and operation of power  
7 generating facilities.

8 MR. KRAMER: We'll stipulate to his  
9 expertise.

10 MR. MILLER: Thank you.

11 BY MR. MILLER:

12 Q And we did relate already your aspect of  
13 your job description related to the Palomar Energy  
14 project in our previous hearing, so I won't repeat  
15 that.

16 Could you please explain the purpose of  
17 your testimony on water resources?

18 A The purpose of my testimony is to  
19 summarize the key characteristics of wet cooling  
20 versus dry cooling. And to basically show that in  
21 this particular case the application of wet  
22 cooling using reclaimed water is the appropriate  
23 selection.

24 Q Are you sponsoring any portions of the  
25 application for certification for the Palomar

1 Energy project that relate to water resources?

2 A Yes, I'm sponsoring exhibit 1, which is  
3 AFC section 2; also AFC section 3 and appendix G.  
4 And I'm sponsoring exhibit 2A, which is data  
5 responses 46 through 48; exhibit 3A, data  
6 responses 134 and 135. Exhibit 16, which is  
7 response to a petition from the intervenor.

8 Exhibit 20 concerning advantages and  
9 disadvantages of wet and dry cooling systems.  
10 Exhibit 23, which is a response to the  
11 intervenor's comments regarding cooling systems.  
12 Exhibit 26, which is a letter from the San Diego  
13 County Water Authority supporting Palomar Energy's  
14 use of reclaimed water.

15 Q And I think you might have omitted AFC  
16 section 5.4 concerning water supply?

17 A I sponsor that, as well.

18 Q Okay. Do you have any corrections to  
19 make to portions of the exhibits that you're  
20 sponsoring?

21 A I have two corrections to make in  
22 exhibit 20. In exhibit 20 on table 5 there is a  
23 cost summary of wet versus dry cooling. And in  
24 that table 5 of exhibit 20 it's noted that the  
25 reclaimed water cost, it denotes a number of 1.5



1 million; that number should be 1.8 million, which  
2 equates to about \$587 per acre foot.

3 Furthermore, in the same table, table 5  
4 of exhibit 20, the value of lost power production  
5 is noted as 1.76 million; that number should be  
6 2.4 million.

7 Both these corrections are noted in my  
8 prepared direct testimony.

9 Q Thank you. Would you please summarize  
10 the balance of your testimony as presented in  
11 attachment WRB?

12 A Again, my testimony relates to wet  
13 versus dry cooling. And in that regard we design  
14 each one of our projects to suit the specific  
15 circumstances for that project. And that includes  
16 the cooling method.

17 We consider environmental, operational  
18 and economic issues. And this has resulted in the  
19 use of various types of wet cooling on various  
20 projects. It's also resulted on two of our  
21 projects the selection of dry cooling.

22 However, on the Palomar Energy project,  
23 cooling with reclaimed water is the right choice.  
24 This choice was made in early 2001 because it's  
25 important to note that the design of the project

1 is, many aspects of the project design are  
2 dependent upon the cooling method.

3 So the selection needs to be made early  
4 in the process so that the design and the  
5 environmental analysis of the project is properly  
6 reflected.

7 The selection of reclaimed water -- or  
8 wet cooling with reclaimed water is the right  
9 choice in the case of this project because first  
10 of all, the water is available at a lower cost  
11 than potable water.

12 It is treated to stringent health  
13 standards by the City of Escondido. Use of  
14 reclaimed water minimizes visual impacts with  
15 incorporation of a plume-abated cooling tower.

16 It minimizes noise. It eliminates the  
17 problem of reverberation noise during steam  
18 turbine bypass operation that's associated with  
19 air cooling condensers.

20 It allows the project to fit on the  
21 small site available. Wet cooling with reclaimed  
22 water maximizes the output and efficiency of the  
23 plant. And wet cooling with reclaimed water  
24 finally results in no significant environmental  
25 impacts.

1           I'll briefly describe the systems  
2           involved in wet cooling versus dry cooling.  
3           Cooling is needed to condense the steam that exits  
4           the steam turbine. And with a wet cooling system  
5           the steam is condensed using circulating water in  
6           a heat exchanger.

7           The circulating water does not actually  
8           contact the steam, but cools the steam in a shell  
9           and tube heat exchanger. And that circulating  
10          water is, in turn, cooled in a cooling tower. And  
11          in the case of Palomar Energy a plume-abated  
12          cooling tower.

13          In the case of dry cooling we still have  
14          the same steam exiting the steam turbine, but with  
15          dry cooling the steam is condensed directly using  
16          air and a large heat exchanger known as an air  
17          cooled condenser.

18          Wet cooling results in greater output  
19          and efficiency than dry cooling. And this is  
20          estimated on an average basis to be about 1.5  
21          percent more output, and 1.5 percent greater  
22          efficiency. On a hot day it's about 4 percent  
23          greater output, 4 percent greater efficiency.

24          This is because with wet cooling the  
25          steam turbine exhaust is cooled to a lower

1 temperature, therefore a lower pressure than is  
2 the case with dry cooling.

3 That's the result of the difference  
4 between dry bulb temperature and wet bulb  
5 temperature. Dry bulb temperature is the  
6 temperature we normally think about when we say  
7 it's 85 degrees out, that's the dry bulb  
8 temperature.

9 On a day, for example, when it is, say,  
10 80 degrees out with a typical relative humidity,  
11 the wet bulb temperature is around 60 degrees.  
12 It's the same reason why when you're out in the  
13 yard playing in the sprinklers you feel a lot  
14 cooler because you're really feeling the wet bulb  
15 temperature rather than the dry bulb temperature.

16 The lost output associated with air  
17 cooling, that is with the dry bulb temperature and  
18 the higher steam turbine exhaust pressure, that  
19 lost output averages around 7 megawatts. For a  
20 situation such as Palomar Energy on a hot day that  
21 loss can be 20 megawatts or even more.

22 In terms of economics on an overall  
23 present value basis, wet cooling is about \$16  
24 million less expensive than dry cooling. That's  
25 with consideration of capital costs, operating

1 costs, efficiency, all the economic factors  
2 included, again on a present value basis. That's  
3 a very conservative assumption, or conservative  
4 result based on conservative assumptions. The  
5 difference could easily be much greater than that.  
6 So I would say at least 16 million.

7 In terms of the project's use of  
8 reclaimed water, Palomar Energy will make very  
9 efficient and stingy use of reclaimed water. To  
10 give you an example, a home that uses 10,000  
11 kilowatt hours per year of electricity, to make  
12 that electricity for that home using energy from  
13 the Palomar project, would require about 2700  
14 gallons of reclaimed water.

15 That same home would use typically over  
16 160,000 gallons of potable water directly. In  
17 other words, the volume of reclaimed water needed  
18 to make the electricity for the home is only about  
19 1.7 percent of the potable water use that's used  
20 directly by that home.

21 Use of reclaimed water by power plants  
22 is encouraged by state policy and specifically the  
23 policy stated in the State Water Board resolution  
24 75-58. Use of reclaimed water rather than potable  
25 water is actually required by law when the

1 reclaimed water is available at a lower cost. And  
2 that's noted in the state water code section  
3 13550.

4 Reclaimed water will have already  
5 received tertiary treatment prior to delivery to  
6 Palomar Energy. That tertiary treatment is done  
7 by the City of Escondido at the Hale Avenue  
8 resource recovery facility, otherwise known as the  
9 HARRF.

10 The City will be delivering the same  
11 water to golf courses, playgrounds, school grounds  
12 and so forth, and including the school grounds  
13 where my own kids go to school. This raises no  
14 concerns for me whatsoever.

15 The plant will have a -- Palomar Energy  
16 project will employ high efficiency drift  
17 eliminators. The efficiency of those will be  
18 .0005 percent of circulating water flow, which  
19 will have the drift at essentially a de minimis  
20 level.

21 The plant will also implement approved  
22 measures to prevent the growth of bacteria in the  
23 circulating water system; and will have systems  
24 that are both automatic, as well as manual, where  
25 manual systems at least twice a day water

1 chemistry is checked. And then on a continuous  
2 basis automatic systems monitor water chemistry  
3 and control the water chemistry.

4 And the other aspects regarding wet  
5 versus dry cooling I think will be covered in  
6 other topic areas.

7 So with that, that would conclude my  
8 summary.

9 Q All right, thank you.

10 MR. MILLER: We'll intend to present our  
11 second witness in this area. And incidentally,  
12 Ms. Gefter, appendix G that Mr. Rowley has just  
13 sponsored was the will-serve letters as you may  
14 have already discovered.

15 Our next witness is Mr. John E.  
16 Hoagland. So I'll introduce Mr. Hoagland. Could  
17 you please state your name and occupation.

18 HEARING OFFICER GEFTER: Mr. Hoagland  
19 needs to be sworn before --

20 MR. MILLER: Oh, I'm sorry, of course.  
21 Whereupon,

22 JOHN E. HOAGLAND  
23 was called as a witness herein, and after first  
24 having been duly sworn, was examined and testified  
25 as follows:

1 HEARING OFFICER GEFTER: Okay, you may  
2 proceed, Mr. Miller, thank you.

3  
4 DIRECT EXAMINATION

5 BY MR. MILLER:

6 Q What is your name and occupation,  
7 please?

8 A My name is John Hoagland, and I'm  
9 Utilities Manager for the City of Escondido.

10 MR. BRIGGS: Mr. Miller, can I just ask  
11 Mr. Hoagland to speak a little closer to the mike;  
12 we're having trouble hearing.

13 MR. HOAGLAND: Is that any better?

14 MR. BRIGGS: A little bit, thanks.

15 BY MR. MILLER:

16 Q Could you please describe your  
17 educational background and your occupational  
18 experience related to your testimony in this  
19 proceeding?

20 A I hold a masters degree in civil  
21 engineering from UCLA; and a bachelors degree in  
22 chemistry from San Diego State University. I'm a  
23 registered civil engineer in California; a  
24 certified water treatment operator grade four.

25 I have nearly 30 years of experience in



1 the water and wastewater field. As Utilities  
2 Manager for the City of Escondido my  
3 responsibilities include management for the City's  
4 wastewater treatment facility, the L Avenue  
5 resource recovery facility, HARRF, and the City's  
6 recycled water program.

7 Q Thank you. And what aspects of your job  
8 have been relevant with respect to the Palomar  
9 Energy project?

10 A As the City of Escondido Utilities  
11 Manager I've worked closely with Palomar Energy to  
12 develop a mutually acceptable technical and  
13 financial arrangement to allow the power plant to  
14 use recycled water produced at the City's HARRF,  
15 and to return it to the City's system for storage  
16 and disposal.

17 Q Would you please explain the purposes of  
18 your testimony?

19 A My testimony briefly describes the City  
20 of Escondido's water reclamation program; how the  
21 power plant fits into the program as a valuable  
22 customer; and to indicate the City's strong  
23 support for the power plant as a user of the  
24 City's recycled water.

25 Q Are you sponsoring any portions of the

1 application for certification or any other  
2 exhibits?

3 A No.

4 Q Could you now summarize your testimony  
5 as presented in attachment WRC to your prefiled  
6 testimony?

7 A In 1991 the City of Escondido passed an  
8 ordinance calling for the development of a water  
9 reclamation plan for the City and establishing  
10 City policy to use recycled water whenever it was  
11 feasible, economically viable, and consistent with  
12 the preservation of public health, safety and  
13 welfare in the environment.

14 The key element of this policy was the  
15 reuse of wastewater treated at the City's Hale  
16 Avenue resource recovery facility.

17 For more than a decade the City has been  
18 developing and implementing plans and projects  
19 that involve one, modifications to the HARRF  
20 facilities to provide treatment capabilities that  
21 yield recycled water that meets regulatory water  
22 quality requirements for reuse and discharge.

23 And, two, a distribution system to bring  
24 the recycled water to identify potential future  
25 users. Adding tertiary treatment also helps the

1 City address water quality and capacity  
2 constraints mostly during wet weather of the ocean  
3 outfall system through which the City disposes of  
4 treated wastewater.

5 Construction of the Escondido regional  
6 recycled water project is complete. The project  
7 is undergoing required testing and certification  
8 prior to beginning operation which is scheduled  
9 for early summer of 2003.

10 The project includes 9 million gallons  
11 per day of tertiary treated water for reuse and  
12 approximately 25 miles of pipeline to bring the  
13 recycled water to the initial customers.

14 Most of the planned customers will use  
15 the water for landscape irrigation of local  
16 schools, parks, golf courses. There are also  
17 industrial customers including the Palomar Energy  
18 project.

19 As planned and designed, the project  
20 includes space and facilities for a second phase.  
21 The second phase would expand tertiary treated  
22 water production capacity to 18 million gallons  
23 per day in the event of increased future demands  
24 for recycled water.

25 Palomar Energy will be the project's

1 largest single customer, purchasing 3.6 million  
2 gallons per day of the total 9 million gallon per  
3 day capacity. Palomar Energy will receive  
4 recycled water under a long-term 30-year contract.  
5 As the only customer willing to enter into such a  
6 long-term contract, the power plant provides long-  
7 term stability to the City's recycled water  
8 program.

9 The power plant's use of recycled water  
10 will not prevent other currently identified  
11 practical customers from obtaining the full amount  
12 of recycled water they wished to purchase.

13 If demand increases in the future the  
14 City's recycled water production capacity can be  
15 expanded, thereby insuring that Palomar Energy  
16 will have a stable, long-term supply of water  
17 without precluding other potential future users.

18 One of the purposes of the City's  
19 recycled water program is to avoid the discharge  
20 to Escondido Creek of secondary treated water  
21 during wet weather when the capacity of the City's  
22 ocean outfall system is strained. The power plant  
23 is expected to reduce the demand on the City's  
24 outfall system by about 2.7 million gallons per  
25 day.

1           By reducing the demand on the outfall  
2       system Palomar Energy's use of recycled water in  
3       effect increases the system capacity by 2.7  
4       million gallons per day and decreases the  
5       likelihood that the system would be overtaxed.

6           Recycled water not used by the power  
7       plant would flow to the ocean through the City's  
8       outfall system.

9           Intervenor Bill Powers has argued that  
10      there may be better uses for the City's recycled  
11      water than the power plant, specifically  
12      groundwater recharge in the San Pasqual Valley and  
13      irrigation of avocado groves in the Escondido  
14      area.

15          The City has considered these specific  
16      alternative potential uses for the past decade,  
17      and both of them have been shown to be highly  
18      speculative, impractical and thus not viable or  
19      prudent for the investment of municipal resources.

20          There's ample recycled water available  
21      to serve both the Palomar Energy project and other  
22      users. And recycled water production capacity can  
23      be increased in the future, if needed. The power  
24      plant is the City's largest recycled water  
25      customer, and by purchasing recycled water under a

1 long-term contract for which there are no other  
2 customers at present, or for the foreseeable  
3 future, Palomar Energy is an important and stable  
4 source of revenue for the City program.

5 The City of Escondido strongly supports  
6 the power plant's use of recycled water.

7 I just -- I think I said it was a 30  
8 year contract; it's a 20 year contract.

9 MR. BLAISING: Your Honor, if I could  
10 provide one clarification, and that is that the  
11 purpose of Mr. Hoagland's testimony goes to the  
12 supply of recycled water. I understand certain of  
13 the applicant's testimony deal with water quality  
14 or resource impacts of the project. Mr. Hoagland  
15 is available to participate, but he's not  
16 sponsoring that portion of the testimony. He  
17 would be available, if it's helpful to the  
18 Committee, to answer any questions.

19 HEARING OFFICER GEFTER: Thank you.

20 MR. MILLER: That concludes our direct  
21 testimony. If you would like to proceed --

22 HEARING OFFICER GEFTER: The witness is  
23 now available for cross-examination.

24 MR. MILLER: I was thinking we were  
25 going to do the staff first --

1 HEARING OFFICER GEFTER: Let staff put  
2 on their testimony first. Is that how the parties  
3 would prefer, that staff put on your testimony  
4 first, and then both applicant's and staff's  
5 witnesses will be available for cross-examination?

6 MR. BRIGGS: I think that's fine.

7 HEARING OFFICER GEFTER: All right.  
8 Staff, go forward with your direct.

9 MR. KRAMER: While our witnesses are  
10 coming up I can offer as to the uncontested  
11 portion of the soil and water topic, exhibits 50,  
12 which is the final staff assessment, and that  
13 portion of exhibit 51, which was the addendum.

14 HEARING OFFICER GEFTER: Also in terms  
15 of the way we're proceeding is that the applicant  
16 has identified your exhibits; you haven't moved  
17 them into the record yet. We'll do that after  
18 cross-examination. And the same with staff,  
19 you've identified your exhibits; we'll move  
20 everything after cross-examination on this topic.

21 MR. KRAMER: That's fine.

22 HEARING OFFICER GEFTER: All right.  
23 Would you have your witnesses sworn, please.  
24 Whereupon,

25 JOHN KESSLER, JAMES L. SCHOONMAKER

1                   and RICHARD LATTERI  
2       were called as witnesses herein, and after first  
3       having been duly sworn, were examined and  
4       testified as follows:

5                   HEARING OFFICER GEFTER: Mr. Kramer,  
6       would you just ask everyone to identify themselves  
7       before you proceed?

8                   MR. KRAMER: Certainly.

9                   DIRECT EXAMINATION

10       BY MR. KRAMER:

11               Q     Can you, one at a time, identify  
12       yourself and spell your name for the court  
13       reporter.

14                   MR. KESSLER: I'm John Kessler; last  
15       name is spelled K-e-s-s-l-e-r.

16                   MR. SCHOONMAKER: I'm James L.  
17       Schoonmaker; that's S-c-h-o-o-n-m-a-k-e-r.

18                   MR. LATTERI: My name is Richard  
19       Latteri; that last name is spelled L-a-t-t-e-r-i.

20                   MR. KRAMER: Okay, we were planning on  
21       presenting a summary of basically the whole of  
22       soil and water, so.

23       BY MR. KRAMER:

24               Q     Mr. Latteri, given that we're now only  
25       talking about issues that are, quote, in issue,



1       it's the water quality issues, do you have  
2       anything to add to the testimony that was in the  
3       staff assessment?

4               MR. LATTERI:  No, I do not.

5               MR. KRAMER:  Okay, we'll hold you for  
6       possible cross-examination then.

7               Mr. Kessler, the same question.

8               MR. KESSLER:  No, I do not.

9               MR. KRAMER:  Okay, Mr. Schoonmaker,  
10      could you describe briefly your qualifications as  
11      an expert in the area of water quality?

12              MR. SCHOONMAKER:  Yes, Hearing Officer  
13      Gefter, I've been in the electric power business  
14      since 1961, graduated from UCLA in engineering.

15              I worked at the Southern California  
16      Edison Company 16 years in operations, ten years  
17      in design.  And then for the IMP, or Independent  
18      Power Producing Subsidiary, Mission, for  
19      approximately seven years.  And I've been a  
20      consultant now since 1994.

21              As a consultant I've prepared  
22      alternative cooling studies for the California  
23      Energy Commission on several different power  
24      plants, including El Segundo, SMUD, Tesla, Blythe  
25      II is in the process, and a couple of others,

1 Burbank and Magnolia.

2 I was a professional engineer for 30  
3 years; that's all of those that are relevant, at  
4 least to these proceedings, I think.

5 MR. KRAMER: Okay, and you prepared the  
6 soil and water resources appendix A to the final  
7 staff assessment, is that correct?

8 MR. SCHOONMAKER: That's correct, sir.

9 MR. KRAMER: Jim Buntin was a co-author.  
10 What was his contribution to that appendix?

11 MR. SCHOONMAKER: Jim Buntin is  
12 primarily expertise in noise.

13 MR. KRAMER: And as we established last  
14 time, the parties agreed Mr. Buntin's presence was  
15 not required at this hearing.

16 Could you summarize your testimony about  
17 what we'll call the wet versus dry cooling  
18 question in this case?

19 MR. SCHOONMAKER: Yes, sir. And I don't  
20 have quite as well organized a presentation as  
21 previous witnesses, so I'll depend upon counsel to  
22 help me with further questions if I miss things.

23 But we did look at several different  
24 options for the Palomar facility, particularly we  
25 looked at the proposed wet cooling system; an air

1       cooled condenser system; and something called  
2       WSAC.

3               The WSAC is probably not relevant for  
4       further reduction. That is, the advantages it  
5       might have had turned out to be not relevant for  
6       this location.

7               HEARING OFFICER GEFTER: Do you want to  
8       tell us what WSAC stands for?

9               MR. SCHOONMAKER: I'm sorry, it's wet  
10       surface air cooler.

11              MR. KRAMER: And how does that differ  
12       from what you would call dry cooling in your  
13       analysis?

14              MR. SCHOONMAKER: The wet surface air  
15       cooler is more similar to the wet cooling  
16       actually. It, like the wet cooling, uses water  
17       evaporation as the cooling media. Unlike the  
18       standard cooling tower, it's more flexible in its  
19       physical configuration; can be made lower; can fit  
20       into more awkward sites; and has some advantages  
21       of freeze protection.

22              MR. KRAMER: Okay, please continue with  
23       your summary.

24              MR. SCHOONMAKER: In comparing the air  
25       cooled condenser and the applicant's proposed

1 cooling it was necessary to design or postulate an  
2 air cooled condenser.

3 We did so and concluded that an air  
4 cooled condenser would have between 35 and 40  
5 cells. And we have configurations and sizes which  
6 were shown in all the material.

7 And it also has substantial cost  
8 impacts. In evaluating this we made an attempt to  
9 optimize the air cooled condenser design. And  
10 this needs to be understood, I think. That is, an  
11 air cooled condenser can be made very large and as  
12 a result thereof, maybe have lower noise levels  
13 and higher efficiency, but a higher cost.

14 Alternatively it can be made very small  
15 so that it fits behind a space, but then we will  
16 lose capacity and heat rate effects. As similar  
17 tradeoffs exist for noise, space, heat rate, cost  
18 and the capacity available for the steam power  
19 plant.

20 Specifically optimizing an air cooled  
21 condenser can only be done by the applicant,  
22 because it requires detailed knowledge of his own  
23 economic base. But as an independent examiner we  
24 can probably get pretty close. And that's what I  
25 did.

1           MR. KRAMER:  So what did you find to be  
2           the relative costs of wet versus dry cooling, or  
3           ACC?

4           MR. SCHOONMAKER:  I didn't bring that  
5           portion of my testimony with me.  Can I be excused  
6           just a second to get it?

7           MR. KRAMER:  Certainly.

8           MR. SCHOONMAKER:  My apologies.  Old  
9           folks don't have much of a memory.

10          The economic conclusions I summarized in  
11          table 8 where we talk about capital costs.  The  
12          capital cost of the proposal I postulated as  
13          between \$14- and \$17-million.  And for an air  
14          cooled condenser, between \$30- and \$35-million.

15          In addition, I evaluated the operating  
16          costs, that is the costs related to the power  
17          consumption of the fans or the circulating water  
18          pumps in the case of the proposal.  And I  
19          postulated or determined a cost of the loss of the  
20          peak megawatts.

21          And you can see in the summary there  
22          that I presented my conclusions relative to the  
23          economics, as well as relative to the water  
24          consumption, footprint required, the volume of the  
25          structure, which is related to the visibility

1 impacts, and some comment on the noise impacts.

2 MR. KRAMER: So do I see this correctly,  
3 it would cost \$36 million present worth for wet  
4 cooling and \$78 million for dry cooling?

5 MR. SCHOONMAKER: Yes, that's correct;  
6 and that's a live cost considering all the  
7 economic factors that we could evaluate.

8 MR. KRAMER: They're reduced to present  
9 dollars?

10 MR. SCHOONMAKER: Yes, that's correct.

11 MR. KRAMER: So you're comparing apples  
12 and apples in that case?

13 MR. SCHOONMAKER: Yes, that's correct.  
14 In fact, some half of that or more is related to  
15 annual cost dollars rather than capital cost  
16 dollars.

17 MR. KRAMER: And dry cooling would be,  
18 looks like roughly three times the square footage  
19 would be required for the dry cooling equipment as  
20 opposed to wet cooling, is that correct?

21 MR. SCHOONMAKER: That's correct. And  
22 that's for the ACC as I optimized it; for the air  
23 cooled condenser, I'm sorry. Hearing Officer,  
24 pardon me when I start using these acronyms.  
25 Engineers.

1           MR. KRAMER:  Would it be possible to  
2       make it smaller, the ACC?

3           MR. SCHOONMAKER:  Yes, it certainly  
4       would be possible to make it smaller.  And if one  
5       were to make it smaller, one of the impacts of  
6       that would be a reduction of costs, the capital  
7       costs.  And another impact would be a substantial  
8       increase in the loss of peak capacity megawatts.  
9       And that, again, addresses itself to the tradeoffs  
10      that I tried to discuss earlier.

11          MR. KRAMER:  So would the total cost of  
12      the smaller unit, in your opinion, be greater or  
13      less than the \$78 million you calculated for the  
14      51,000 square foot?

15          MR. SCHOONMAKER:  It would be greater.

16          MR. KRAMER:  What would happen to the  
17      noise of that smaller unit?

18          MR. SCHOONMAKER:  The smaller system  
19      would increase in noise somewhat because the  
20      horsepower of the fans, the power requirements for  
21      the fans would go up.  And that would increase the  
22      noise level somewhat.

23          MR. KRAMER:  Is that because they have  
24      to move more air over smaller cooling surfaces?  
25      Something on the --

1           MR. SCHOONMAKER: Yes. And because of  
2           the greater pressure drop, the pressure lost  
3           through there causes the wind to whistle, as we  
4           might think of. The greater the pressure drop the  
5           more the noise that's created.

6           MR. KRAMER: Mr. Powers has suggested  
7           several arguments against the use of wet cooling.  
8           One of the issues he's raised is the presence of  
9           ammonia in the recycled water.

10          Did you consider that issue?

11          MR. SCHOONMAKER: Yes. While I don't  
12          consider myself a chemistry expert, I did review  
13          that.

14          MR. KRAMER: What was your conclusion?

15          MR. SCHOONMAKER: My conclusion is that  
16          I have no experience, nor was I able to find any  
17          in the literature, which said that ammonia  
18          rejection from the wet cooling system was a  
19          significant factor.

20          And matter of fact, no reference at all.  
21          That includes things like cooling tower institutes  
22          and operator surveys and these things.

23          MR. KRAMER: Did you review Mr. Powers'  
24          testimony regarding this subject?

25          MR. SCHOONMAKER: Yes, sir, I did.



1           MR. KRAMER: Did you have any points of  
2           disagreement with his testimony?

3           MR. SCHOONMAKER: Yes, I had several  
4           points of disagreement with his testimony.

5           MR. KRAMER: Could you describe those  
6           for us?

7           MR. SCHOONMAKER: One of the essential  
8           disagreements was concerning his proposal to use,  
9           as cost for the proposed system, costs that would  
10          be borne by the City or by other predecessors.  
11          That is the presumption that we make in  
12          engineering economics is that people in a free  
13          environment charge what's to their advantage to  
14          charge for their product. And that would  
15          certainly include the cost of the water that was,  
16          reclaimed water that was being provided by the  
17          City of Escondido.

18          So, I disagreed with Mr. Powers  
19          perceived need to evaluate the cost of facilities  
20          going back into the City and water predecessors to  
21          the City.

22          MR. KRAMER: You did set some sort of  
23          price for the water, though, in calculating the  
24          operating expenses, right?

25          MR. SCHOONMAKER: Yes, I did.

1           MR. KRAMER: And where did you get that  
2 price?

3           MR. SCHOONMAKER: I got that from some  
4 discussion with several people that provided  
5 experience from other situations. And it was not  
6 known. Mr. Hoagland testified this morning -- I'm  
7 sorry, I believe it was Mr. Hoagland who testified  
8 the cost of water -- oh, I'm sorry -- applicant  
9 testified that it was going to be \$500-and-some-  
10 odd per acre foot. My presumption that it would  
11 be between \$400 and \$600 per acre foot.

12           And in that quantity the cost is  
13 significant, but it's not fatal.

14           MR. KRAMER: Did you have any other  
15 concerns with Mr. Powers' testimony?

16           MR. SCHOONMAKER: In portions of his  
17 testimony he talked about the generation of  
18 ammonia. And there were assumptions made that the  
19 system would behave in a certain way as far as the  
20 percentage of ammonia that was in the cooling  
21 tower would be off-gassed, or sent off as a vapor.

22           But there was no information or  
23 calculations provided that would support that  
24 percentage of emissions of ammonia that's in the  
25 water.

1           And in a practical sense, having  
2           operated in power plants for a lot of years, we  
3           have never particularly noticed that there was  
4           ammonia off-take. It takes very little ammonia  
5           for it to create quite a smell. And in living  
6           around power plants we've never noticed an ammonia  
7           smell.

8           So from that practical consideration my  
9           belief is that the proportion of ammonia that is  
10          actually off-taken in the wet system would be very  
11          small.

12          MR. KRAMER: Now, in staff's, the main  
13          body of the staff assessment on water issues,  
14          staff did not discuss dry cooling at all, except  
15          to refer to your appendix, correct?

16          MR. SCHOONMAKER: I believe that's  
17          correct, yes, sir.

18          MR. KRAMER: Now let me ask this of Mr.  
19          Latteri, since he was the primary author of the  
20          main body.

21          Mr. Latteri, did staff find any  
22          environmental impacts that were unmitigable from  
23          the use of recycled water in cooling this proposed  
24          project?

25          MR. LATTERI: No, we did not.

1           MR. KRAMER: And can you explain why the  
2 original staff analysis did not -- let me back up.  
3 I gather then that the appendix A was written in  
4 response to the Committee's request that the issue  
5 of dry cooling be addressed, is that correct?

6           MR. LATTERI: That is correct.

7           MR. KRAMER: Can you explain why you  
8 didn't address that issue previously in the  
9 testimony, the staff assessments that were  
10 prepared for this project?

11          MR. LATTERI: Although the topic came up  
12 in the original meeting that the Commission had in  
13 regards to doing a dry cooling study with --  
14 excuse me, the Chairman that just retired, his  
15 name is?

16          HEARING OFFICER GEFTER: Commissioner  
17 Laurie?

18          MR. LATTERI: Yes, exactly, Commissioner  
19 Laurie. He had considered or made a commitment to  
20 Mr. Powers that we would do a dry cooling  
21 analysis.

22                 We took it back to our internal staff in  
23 the water and soils. We saw that because they  
24 were using reclaimed water that was going to be  
25 discharged to ocean outfall that it did fall

1 within the guidelines of resolution 75-58. That  
2 we could see no impacts of using that water  
3 source. It was not up to the Commission to design  
4 the applicant's project.

5 MR. KRAMER: So is it fair to say you  
6 saw no reason to go beyond wet cooling in this  
7 case?

8 MR. LATTEI: Correct. In the  
9 environment that the plant is located here in  
10 Escondido, with a very large supply of reclaimed  
11 water, and with the ability to add additional  
12 capacity to that reclaimed water system, we saw  
13 that there were no impacts to other users of the  
14 water.

15 Of course, if you're in a drier  
16 situation, a desert, you don't have a large  
17 community supplying effluent to your water  
18 treatment plant that can be turned around as a  
19 cooling water source, of course we would look at  
20 dry cooling over a surface water body or a  
21 groundwater source.

22 But in this case the reclaimed water  
23 supply was there. It was under-utilized. And  
24 there was room for additional future capacity if  
25 the demand were to arise.

1                   MR. KRAMER: Thank you. We have no  
2 further questions.

3                   HEARING OFFICER GEFTER: Does that  
4 conclude your direct testimony?

5                   MR. KRAMER: Yes.

6                   HEARING OFFICER GEFTER: I have a  
7 question for Mr. Latteri before we open the  
8 witnesses up for cross-examination.

9                   You indicated that staff found there  
10 were no impacts to water supply or water quality  
11 as a result of the applicant's proposal to use wet  
12 cooling.

13                  Could you give us the elements that  
14 staff looks at to determine whether or not there  
15 would be impacts?

16                  MR. LATTERI: In terms of the water  
17 source that we're using, or the cooling medium, in  
18 this case wet cooling, we would look at the  
19 availability of a water source. Getting back to  
20 resolution 75-58 it is -- to use surface water or  
21 groundwater should not be the first choice of  
22 being used as a cooling source.

23                  We look to wastewater discharged to the  
24 ocean or other sources of reclaimed water, or  
25 other non-sources that could be used for potable

1 water supply. And in that case we will ask for an  
2 analysis of why that particular choice was used,  
3 if you're using a surface water or groundwater  
4 source.

5 Then there is the discharge, potential  
6 impacts of discharging the process wastewater.  
7 Will there be adverse impacts to a land discharge  
8 or to a surface water body discharge.

9 And in this case, with the closed loop  
10 system, that the water would be provided by the  
11 Hale Avenue Resource Recovery Facility, cycled  
12 about four times to the power plant. Then  
13 returned in a line back to the Hale Avenue  
14 Resource Recovery Facility, was a very good design  
15 and use of existing resources with no unmitigable  
16 impacts.

17 HEARING OFFICER GEFTER: You're familiar  
18 with the workshop that was conducted again by  
19 Commissioner Laurie two years ago on water  
20 resources and water supply? Are you familiar with  
21 that workshop?

22 MR. LATTEI: Yes, I was there.

23 HEARING OFFICER GEFTER: And staff  
24 thereafter issued a memo summarizing the results  
25 of that workshop, do you remember that?

1                   MR. LATTERI: Correct, the status  
2                   report?

3                   HEARING OFFICER GEFTER: Right, the  
4                   staff report. And that's a public document,  
5                   Commission document.

6                   MR. LATTERI: Yes, I do.

7                   HEARING OFFICER GEFTER: And do you  
8                   remember that the document indicated that the  
9                   Committee directed staff to work together with the  
10                  Water Resources Board to develop a new policy, and  
11                  in fact, would recommend that dry cooling would be  
12                  favored. And that seemed to be a conclusion of  
13                  that workshop. Is that an accurate representation  
14                  as you remember it?

15                  MR. LATTERI: No, I'm sorry, I do not  
16                  recall.

17                  HEARING OFFICER GEFTER: To your  
18                  knowledge has there been any change in Commission  
19                  policy regarding wet cooling or dry cooling since  
20                  that workshop occurred two years ago?

21                  MR. LATTERI: By the State Water  
22                  Resources Control Board? Is that your question?

23                  HEARING OFFICER GEFTER: By the  
24                  Commission.

25                  MR. LATTERI: By the Commission. Not



1       that I'm aware of.

2               HEARING OFFICER GEFTER:   Then I had one  
3       last question, Mr. Latteri.   I'm not sure if you  
4       were the one who did the analysis in terms of  
5       water quality, but the applicant is required to  
6       obtain an industrial user permit for its  
7       wastewater discharge, for the discharge of the  
8       brine --

9               MR. LATTERI:   Correct.

10              HEARING OFFICER GEFTER:   -- concentrate?

11              MR. LATTERI:   That is correct.

12              HEARING OFFICER GEFTER:   Okay.   And did  
13       staff do any kind of modeling or review of the  
14       results of the brine discharge in terms of its  
15       impacts to any of the outfalls?

16              MR. LATTERI:   We reviewed the discharge,  
17       the NPDES discharge permit that the Hale Avenue  
18       Resource Recovery Facility is under, which they  
19       are actually the receiver of the brine effluent.

20              We looked, we compared the amounts of  
21       the constituents of the initial reclaimed water  
22       coming into the plant versus its brine return.  
23       Compared that to its NPDES permit, as well.

24              HEARING OFFICER GEFTER:   Okay.   And what  
25       did you conclude?

1           MR. LATTERI: That the mg/liter -- we  
2           concluded that it was all within specifications  
3           discharge limits of the HARRF's NPDES permit.

4           HEARING OFFICER GEFTER: So you  
5           concluded that the discharge would comply with  
6           existing LORS?

7           MR. LATTERI: Yes.

8           HEARING OFFICER GEFTER: Thank you. At  
9           this point, do the Commissioners have any  
10          questions? Let's proceed with cross-examination.  
11          Mr. Briggs, are you prepared to cross-examine the  
12          witnesses?

13          MR. MILLER: May I interject one quick  
14          procedural question? When we presented our direct  
15          testimony we did not include a short prepared  
16          rebuttal testimony, thinking that that would come  
17          after Mr. Powers' presentation.

18          But staff did include their rebuttal  
19          now, which is fine with us. If you would like us  
20          to, in five minutes we could complete that aspect.  
21          Or we could hold it, whichever you prefer.

22          HEARING OFFICER GEFTER: Let's hold it.  
23          And you'll find out whether it's necessary to  
24          rehabilitate your witness after Mr. Briggs  
25          proceeds with cross-examination.

1           MR. MILLER: I'm speaking of rebuttal  
2 rather than redirect.

3           HEARING OFFICER GEFTER: Well, I think  
4 -- let's go forward --

5           MR. MILLER: Okay.

6           HEARING OFFICER GEFTER: -- with the  
7 cross-examination.

8           MR. MILLER: Fine, thank you.

9           HEARING OFFICER GEFTER: Okay, so we  
10 haven't even had -- actually you can do cross-  
11 examination and then you're going to go to direct,  
12 is that your plan?

13          MR. BRIGGS: Yes.

14          HEARING OFFICER GEFTER: Okay. Because  
15 they haven't even put on their direct testimony  
16 yet.

17          MR. MILLER: I understand. I just  
18 thought I'd better speak up.

19          HEARING OFFICER GEFTER: All right.  
20 Let's go forward now.

21          MR. BRIGGS: Does it matter whether I do  
22 cross on staff before I deal with the applicant --

23          HEARING OFFICER GEFTER: No, it doesn't  
24 matter. Let's just go forward and you can cross  
25 either party's witnesses at this point.

1 MR. BRIGGS: And my understanding from  
2 before is that if we need to go to different sides  
3 of the table to get the answer, that's fine?

4 HEARING OFFICER GEFTER: That would be  
5 fine.

6 MR. BRIGGS: I'd like to start with Mr.  
7 Latteri.

8 CROSS-EXAMINATION

9 BY MR. BRIGGS:

10 Q Mr. Latteri, page 4.9-19 of the FSA, the  
11 conclusion section begins with a commendation to  
12 the applicant for proposing the use of reclaimed  
13 water. Why was the applicant commended for using  
14 reclaimed water? Mr. Rowley testified earlier  
15 that by law they're required to use it. What's  
16 the purpose of the praise here?

17 MR. LATTERI: They chose it without --  
18 it wasn't a preferred alternative for the cooling  
19 process at the plant. If they wanted to, they  
20 could have come to the Commission with a cooling  
21 option that either used groundwater or possibly  
22 imported water supply.

23 In that case we would have asked the  
24 applicant to provide an analysis, an economic  
25 analysis and feasibility study of alternatives to

1 surface water or groundwater for cooling the power  
2 plant.

3 In the environment that the power plant  
4 is located, within a city that generates large  
5 volumes of wastewater there was the use of  
6 reclaimed water from that wastewater facility was  
7 a good choice, in my opinion.

8 MR. BRIGGS: It sounded to me as though  
9 it was the only choice, given what Mr. Rowley  
10 testified to earlier, that by law he's required,  
11 Palomar's required to use it if the price is less.

12 MR. LATTEI: We had no price numbers to  
13 evaluate at the time of the application.

14 MR. BRIGGS: Are you familiar with the  
15 State Water Resources Control Board's resolution  
16 75-58 regarding the use of alternatives to potable  
17 water on cooling towers?

18 MR. LATTEI: Yes, I am.

19 MR. BRIGGS: What's your understanding  
20 of that resolution?

21 MR. LATTEI: That potable water should  
22 not be --

23 HEARING OFFICER GEFTER: I'm sorry.  
24 I'll accept an objection if you have an objection  
25 as to this. This is not a witness who can testify

1 as to a legal analysis.

2 MR. KRAMER: Yes, I --

3 MR. BRIGGS: I just wanted to know his  
4 understanding as the person who does the review  
5 with that policy.

6 MR. KRAMER: I would object to the  
7 question as vague. He's asking him to explain the  
8 whole policy rather than its application to any  
9 particular set of facts.

10 MR. BRIGGS: Fair enough.

11 HEARING OFFICER GEFTER: If you could  
12 just reframe the question, Mr. Briggs.

13 MR. BRIGGS: Sure. Mr. Latteri, in the  
14 context of the Palomar project, what's your  
15 understanding of how resolution 75-58 operates?

16 MR. LATTERI: 75-58 encourages the use  
17 of other sources of cooling water other than  
18 surface water or groundwater that is of good  
19 quality. That is my understanding of it.

20 MR. BRIGGS: Do you know whether the  
21 Commission has adopted any sort of interpretations  
22 of resolution 75-58? Or provided any guidance to  
23 its staff on how to evaluate projects, given  
24 resolution 75-58's existence?

25 MR. KRAMER: Object to the first part of

1 the compound question as vague. But he can  
2 answer, no objection to the second part.

3 MR. LATTEI: Could you please repeat  
4 the second part?

5 MR. BRIGGS: Probably not, so let me re-  
6 ask the question.

7 HEARING OFFICER GEFTER: Why don't you  
8 rephrase the question and --

9 MR. BRIGGS: Sure, I'm just trying to  
10 get a sense of whether the Commission has provided  
11 staff with any sort of guidance on how to take  
12 resolution 75-58 and put it into action when  
13 you're analyzing an application for certification.

14 In other words, from the Commission's  
15 point of view, what impact does the State Water  
16 Resources Control Board's resolution have on your  
17 analysis of a project?

18 MR. LATTEI: So let me try to rephrase  
19 your question to me. What impact does resolution  
20 75-58 have on my analysis?

21 MR. BRIGGS: Yeah, I mean has the  
22 Commission given staff any sort of training in  
23 light of resolution 75-58? Have there been any  
24 workshops that say here's what the State Board has  
25 passed as a resolution. This is what we think we

1       need to do to honor the spirit of it. Anything  
2       like that?

3               MR. LATTERI: To my knowledge we have  
4       encouraged the Water Resources Control Board to  
5       possibly give us a greater, or to possibly amend  
6       resolution 75-58 to give us greater direction in  
7       its use. But that is the only, other than my on-  
8       the-job training additional exposure to  
9       discussions on resolution 75-58.

10              MR. BRIGGS: This on-the-job training,  
11       what --

12              MR. KRAMER: I object to this line of  
13       questioning. We're here to talk about the facts  
14       that relate to the project, not the internal  
15       management of the Energy Commission, I believe.

16              HEARING OFFICER GEFTER: I am also not  
17       clear that this is relevant to the project,  
18       itself. And the witness has testified as an  
19       expert. He does the analysis for staff. And, you  
20       know, his work is reviewed by management, so that  
21       I don't think we need to go any further with this.

22              MR. BRIGGS: The reason for the question  
23       is I'm trying to figure out whether Palomar could  
24       even get an application for certification approved  
25       if they were trying to use potable water. Would



1 staff have recommended something to that effect?

2 MR. KRAMER: That's a clear question --

3 HEARING OFFICER GEFTER: Well, that's  
4 speculation and --

5 MR. BRIGGS: I want to know what Mr.  
6 Latteri's recommendation would be.

7 HEARING OFFICER GEFTER: Okay, so your  
8 question is, and I'll reframe it --

9 MR. BRIGGS: Sure.

10 HEARING OFFICER GEFTER: -- or rephrase  
11 it, if the Palomar project had proposed to use  
12 potable water from the City of Escondido rather  
13 than recycled water in its AFC, what would staff  
14 have recommended at that point.

15 MR. MILLER: Now I'm going to have to  
16 object. Because now I think we have a  
17 hypothetical question that staff has never  
18 reviewed up to this moment.

19 HEARING OFFICER GEFTER: Well, right,  
20 and I think what Mr. Briggs is getting at is  
21 whether the staff automatically accepts  
22 applications that propose to use recycled water  
23 without looking into alternatives. Is that what  
24 you're looking for?

25 MR. BRIGGS: That's right.

1 HEARING OFFICER GEFTER: Okay. I'll let  
2 you answer the question and then we'll move on to  
3 the specific project.

4 MR. KRAMER: That would be the question  
5 that you just last framed?

6 HEARING OFFICER GEFTER: The one that I  
7 phrased, yes.

8 MR. LATTEI: Yes, I'm sorry, Ms.  
9 Gefter, could you --

10 HEARING OFFICER GEFTER: If the Palomar  
11 AFC had proposed to use potable water from the  
12 City of Escondido rather than recycled water, what  
13 would staff have recommended at that point.

14 MR. KRAMER: Actually the one I heard  
15 and wasn't going to object to was -- let me try --  
16 because the applicant came to staff proposing the  
17 use of recycled water, did staff consciously avoid  
18 looking at other alternatives to the use of  
19 recycled water.

20 HEARING OFFICER GEFTER: Okay, can you  
21 answer that question? Is that what you want, Mr.  
22 Briggs?

23 MR. BRIGGS: I don't --

24 HEARING OFFICER GEFTER: All right, what  
25 is --

1           MR. BRIGGS:  -- I'm not concerned so  
2 much that it was a conscious decision, I just want  
3 to know whether an application that comes in with  
4 recycled water to that extent is accepted simply  
5 because it's recycled water, or are alternatives  
6 considered.

7           HEARING OFFICER GEFTER:  Okay.  You know  
8 what, I think we're going to just -- I'm going to  
9 end this line of question, because I think that  
10 it's all very speculative.  I think that Mr.  
11 Latteri's direct testimony addressed that, that  
12 they looked at it because of the specifics in this  
13 case.  And we're going off on a very speculative  
14 line of questioning here.

15           So let's cut that right now, and let's  
16 move on to specifics about the Palomar project.

17           MR. BRIGGS:  Mr. Latteri, if I heard you  
18 correctly, earlier you said that when you look at  
19 the water supply you look at it in terms of its  
20 availability.  That was one of the criteria that  
21 you mentioned earlier in response to Ms. Gefter's  
22 question.

23           Do you also look at the constituents of  
24 the water supply when you analyze -- let me  
25 rephrase it.  In this case, the Palomar case, did

1       you look at the constituents of the water supply  
2       coming from HARRF?

3               MR. LATTERI:  Yes, I did.

4               MR. BRIGGS:  What constituents did you  
5       find in the water?

6               MR. LATTERI:  Well, without reviewing my  
7       document, I don't want to -- I would hesitate to  
8       say what they are.

9               MR. BRIGGS:  Are the constituents those  
10      that are listed in the AFC on page 4.9-6?

11              MR. LATTERI:  One moment, please, we're  
12      pulling it up.

13              (Pause.)

14              MR. KRAMER:  Are you referring to soil  
15      and water resources table 1?

16              MR. BRIGGS:  Yes, table 1.

17              MR. LATTERI:  Yes, those are the  
18      constituents provided by the applicant.

19              MR. BRIGGS:  Are there any other  
20      constituents in the supply water that you know of?

21              MR. LATTERI:  No, I don't.

22              MR. BRIGGS:  You don't know, or there  
23      are no other constituents?

24              MR. LATTERI:  No, I do not know if there  
25      are other constituents.

1           MR. BRIGGS:  So you're not aware whether  
2           there are any heavy metals in HARRF's -- in the  
3           supply water that would come to Palomar, do you?

4           MR. LATTERI:  No.

5           MR. BRIGGS:  Do you know what tertiary  
6           treatment does to secondary effluent?

7           MR. LATTERI:  Yes, I do.

8           MR. BRIGGS:  What does it do?

9           MR. LATTERI:  Tertiary treatment will  
10          provide reduction in turbidity, as well as  
11          additional biocides for chlorination and reduction  
12          in organic compounds within the water.

13          MR. BRIGGS:  Do you know what the  
14          tertiary treatment at HARRF is going to entail?

15          MR. LATTERI:  It needs to comply with  
16          the standards set out by the Department of Health  
17          Services, title 22.

18          MR. BRIGGS:  Do you know whether they're  
19          using reverse osmosis at HARRF in the tertiary  
20          stage?

21          MR. LATTERI:  No, I don't.

22          MR. BRIGGS:  If there are heavy metals  
23          in the tertiary water supply to Palomar, will  
24          those metals come out during the cooling process,  
25          or will they be in the brine that's returned to

1 HARRF for treatment?

2 MR. LATTERI: Being that the water is  
3 coming from a publicly owned treatment water  
4 processing facility there should be no heavy  
5 metals in the water.

6 MR. BRIGGS: My understanding in looking  
7 at applicant's response to my client's data  
8 request of October of last year indicated that  
9 some heavy metals were detected in the secondary  
10 effluent. If those heavy metals are not removed  
11 before water is sent to Palomar --

12 MR. KRAMER: Can you refer us to that  
13 statement so he can look at it first?

14 MR. BRIGGS: Sure.

15 HEARING OFFICER GEFTER: Mr. Briggs, I'm  
16 not really sure where you're going with asking the  
17 staff's witness these questions because Mr.  
18 Hoagland is here, and he runs the HARRF, and he  
19 would be able to answer those questions.

20 So, --

21 MR. BRIGGS: Fair point. The reason I'm  
22 asking is because -- well, perhaps I should just  
23 go ask Mr. Hoagland, and if we need to, come back  
24 to staff. Would that make things go a little more  
25 efficiently?

1 HEARING OFFICER GEFTER: Yes.

2 MR. BRIGGS: Mr. Hoagland, are there any  
3 heavy metals -- will there be any heavy metals in  
4 the water that is supplied to the Palomar  
5 facility?

6 MR. HOAGLAND: You know, offhand I don't  
7 know.

8 MR. BRIGGS: How could we find out? Are  
9 there any documents here that we could look at to  
10 help us figure that out?

11 MR. HOAGLAND: I don't know.

12 HEARING OFFICER GEFTER: Can Mr. Rowley  
13 answer those questions?

14 MR. ROWLEY: Well, first of all there is  
15 an EIR performed on the reclaimed water project.  
16 And it's a very thick, extensive document. The  
17 water is intended for uses all over town,  
18 playgrounds, parks and so forth.

19 I'm quite certain that the constituents  
20 in the water would have been considered in that  
21 EIR. Although I don't have direct knowledge of  
22 it, myself.

23 What I do have direct knowledge of is  
24 that any dissolved solids in the reclaimed water  
25 supply to the project would remain in the brine.

1 The only extent to which any dissolved solids that  
2 are not volatile potentially could come out of the  
3 water, and even volatile ones we're talking about  
4 a tiny fraction of a percent, but heavy metals are  
5 not volatile.

6 So, the only extent to which they could  
7 go into the atmosphere would be to the extent that  
8 the cooling tower has drift emissions. The drift  
9 eliminators that we're using, again are the .0005  
10 percent efficiency level. So the drift emissions  
11 are de minimis.

12 So, from the standpoint that the same  
13 water could be used in a playground, and people  
14 could contact it potentially fairly closely, from  
15 that standpoint, and then taking that water and  
16 then multiplying it by .0005 percent, as drift  
17 emissions in the cooling tower, I would certainly  
18 conclude that whatever such constituents there  
19 might be in that water would have no significant  
20 environmental effect.

21 MR. BRIGGS: Well, I'm not concerned  
22 about air emissions. I would like to point Mr.  
23 Hoagland to exhibit 92, which is applicant's data  
24 response dated October 9, 2002. It includes the  
25 discharge monitoring report from HARRF.



1 MR. BLAISING: Mr. Briggs, if you would  
2 provide a copy of that; we --

3 MR. BRIGGS: I think you guys --

4 MR. BLAISING: -- do not have one.

5 MR. BRIGGS: -- should have exhibit 92.

6 MR. ROWLEY: I think I understand your  
7 question better. This is a simple mass balance  
8 question.

9 MR. BRIGGS: Yeah, I simply want to  
10 know, those DMRs indicate that there are heavy  
11 metals in the supply water. And those metals, if  
12 I understood your testimony correctly, aren't  
13 going up into the air, they're going to be back in  
14 the brine that's --

15 MR. ROWLEY: They would be in the brine,  
16 that's right. The answer to your question is that  
17 it doesn't matter whether the City serves  
18 reclaimed water to the Palomar project or not,  
19 because the dissolved solids will still end up in  
20 the HARRF's ocean outfall, either way. There  
21 would be no difference whatsoever.

22 MR. BRIGGS: The brine, however, is  
23 going to contain heavy metals, is that right?

24 MR. ROWLEY: The brine would contain  
25 whatever dissolved solids are in the reclaimed

1 water that was supplied to the project. And the  
2 brine would go back to the HARRF, the same place  
3 where the reclaimed water originated.

4 So, from the standpoint of total  
5 dissolved solids, whether they be whatever  
6 constituents they are, they would end up in the  
7 HARRF's ocean outfall, either way. No difference  
8 whatsoever.

9 MR. BRIGGS: So, just to sort of put a  
10 period on the end of this line, if there are heavy  
11 metals coming in, and they're detectable, they're  
12 going to be detectable in the brine, is that  
13 right?

14 MR. ROWLEY: Hypothetically.

15 MR. BRIGGS: Before I ask Mr. Hoagland  
16 any more questions, earlier we said that the water  
17 supply agreement would be introduced in exchange  
18 for some other documents.

19 I received a copy of the water supply  
20 agreement last Thursday from the City, but I don't  
21 know whether a copy has been circulated and  
22 introduced. Before I ask questions about it I  
23 would like to make sure that I have the same copy.  
24 And I'm about to ask questions about it, so I  
25 would like to have Mr. Blaising circulate that if

1 possible.

2 HEARING OFFICER GEFTER: While Mr.  
3 Blaising is circulating a copy of the document,  
4 who is going to sponsor this? Mr. Briggs, are you  
5 going to sponsor this document?

6 MR. BRIGGS: I'll sponsor it.

7 HEARING OFFICER GEFTER: So this  
8 document will be marked as exhibit 111, I believe.

9 MR. BRIGGS: I think it's 111.

10 HEARING OFFICER GEFTER: Yes.

11 MR. KRAMER: And together these two  
12 pages are all --

13 MR. BRIGGS: Two pages, lots of pages.

14 MR. KRAMER: Oh, I guess --

15 MR. BRIGGS: It looks like the cover  
16 sheet wasn't stapled to the --

17 MR. KRAMER: Okay, so it's all the same  
18 document?

19 MR. BRIGGS: Yes.

20 HEARING OFFICER GEFTER: Okay.

21 MR. KRAMER: 111. Thank you.

22 HEARING OFFICER GEFTER: So the document  
23 is the recycled water service agreement among City  
24 of Escondido and the Rincon Del Diablo Municipal  
25 Water District and Palomar.

1 MR. BRIGGS: That's correct.

2 HEARING OFFICER GEFTER: Dated March 26,  
3 2003.

4 MR. BRIGGS: That's correct.

5 MR. MILLER: And that's 111?

6 HEARING OFFICER GEFTER: 111.

7 MR. MILLER: How did we get to 111?

8 Somehow I'm missing 108, '9 and '10.

9 MR. KRAMER: 110 is on the list.

10 MR. MILLER: Oh, there's a last page  
11 that I'm missing, that's the reason.

12 HEARING OFFICER GEFTER: You must be  
13 missing a page. Okay, Mr. Briggs.

14 MR. BRIGGS: Mr. Hoagland, are you  
15 familiar with this contract?

16 MR. HOAGLAND: Yes.

17 MR. BRIGGS: Were you involved in this  
18 negotiations at all?

19 MR. HOAGLAND: Yes.

20 MR. BRIGGS: In article 5, paragraph  
21 5.1.1 --

22 MR. BLAISING: Would you repeat that  
23 reference?

24 MR. BRIGGS: Sure. It's article 5,  
25 paragraph 5.1.1, makes reference to a base

1 capacity charge. What's the base capacity charge?  
2 And the reason I'm asking these definitional  
3 questions is because the definition section of the  
4 agreement simply says the term is means the way  
5 it's used in the document. So, the definition has  
6 me asking questions.

7 MR. BLAISING: Let me just interject at  
8 this point, I understand that Mr. Hoagland was  
9 involved in the negotiations in terms of the rate  
10 structure. I'm not sure that he is the best City  
11 witness to address that particular question.

12 MR. BRIGGS: Well, there's a rate that's  
13 attached to the base capacity charge. I just want  
14 to know what a base capacity charge is. What is  
15 applicant getting for its 31 cents per unit?

16 MR. MILLER: I'd just like to interject,  
17 Mr. Rowley was on the other side of the  
18 negotiations, so he does have personal knowledge  
19 of some of these matters, as well.

20 MR. HOAGLAND: The base capacity charge  
21 was simply a negotiated element by which we worked  
22 with the applicant, Palomar Energy, to establish  
23 charges for recycled water to be provided to the  
24 plant.

25 MR. BRIGGS: What's your understanding

1 of the phrase, take or pay?

2 MR. HOAGLAND: This is a portion that  
3 they will pay whether they take water or not. So  
4 it's a commitment to pay for the water whether or  
5 not it's used.

6 MR. BRIGGS: What does the additional  
7 capacity charge refer to? That's 50 cents per  
8 unit, in paragraph 5.1.2. What does that get the  
9 applicant?

10 MR. BLAISING: Your Honor, I would  
11 object to that. The price and the charges are set  
12 forth in the document, themselves. They clearly  
13 relate to a price. Mr. Hoagland can testify to  
14 their operation in terms of the ultimate cost that  
15 would be borne by the applicant, but in terms of  
16 interpreting each specific charge item, again, I  
17 don't believe that Mr. Hoagland is the appropriate  
18 witness to address that. He can touch on the  
19 operation, as you suggested, the take or pay  
20 provisions relating to what I believe to an issue  
21 of relevance, the cost, the overall cost --

22 MR. BRIGGS: Since Mr. Hoagland was one  
23 of the persons who negotiated it, and that term is  
24 defined circularly, I simply would like to know  
25 whether this is for providing water to Palomar, or

1       for taking it away. Is the base capacity charge  
2       for providing reclaimed water or for taking it  
3       away?

4               MR. BLAISING: Again, I would object to  
5       that on the basis that the charges are set forth  
6       in the agreement. The document speaks for itself  
7       as to what those charges are in total.

8               HEARING OFFICER GEFTER: The objection  
9       is sustained. The document speaks for itself and  
10      I think we can read what it says.

11              MR. BRIGGS: Fair enough, but it's also  
12      a recycled water service agreement. What I'd like  
13      to know is whether costs for treating the brine  
14      are included in this agreement.

15              MR. BLAISING: Would you rephrase that?

16              MR. BRIGGS: Sure.

17              MR. BLAISING: Repeat that --

18              MR. BRIGGS: Are costs for treating the  
19      brine that comes from Palomar included in this  
20      agreement?

21              MR. HOAGLAND: Yes.

22              MR. BRIGGS: Where?

23              MR. HOAGLAND: It's part of the overall  
24      cost of providing the water.

25              MR. BRIGGS: How much does the City of

1 Escondido charge other industrial users for  
2 wastewater treatment?

3 MR. BLAISING: Objection again. The  
4 issue is the cost associated with wet cooling --

5 MR. BRIGGS: And the processing of  
6 wastewater.

7 MR. BLAISING: -- and the --

8 MR. BRIGGS: And nowhere in this  
9 agreement is the term wastewater used. And  
10 nowhere is there a price indicated expressly for  
11 treating the wastewater. If there is, I would  
12 just like to see it.

13 MR. BLAISING: I believe you asked the  
14 question is the cost associated with the brine  
15 return included in the agreement and the answer  
16 was yes.

17 MR. BRIGGS: So, is --

18 HEARING OFFICER GEFTER: At this point  
19 I'm not clear on the relevance of this, of your  
20 line of questioning at this point.

21 MR. BRIGGS: The relevance is that the  
22 cost analysis that was done for operating the  
23 Palomar plant includes the cost of water supplied  
24 and should include the cost of water treatment.  
25 Water treatment is not listed in the cost



1 comparison that was done.

2 We're trying to figure out whether the  
3 cost comparison was adequately performed on this  
4 project.

5 HEARING OFFICER GEFTER: Okay, and  
6 you're referring both to staff's analysis and to  
7 applicant's analysis --

8 MR. BRIGGS: That's right, --

9 HEARING OFFICER GEFTER: -- on the  
10 cost --

11 MR. BRIGGS: -- and so we have a price  
12 of \$1.66 per unit, which is 1000 gallons. It's  
13 going through Rincon del Diablo. Rincon del  
14 Diablo charges \$1.68 per thousand gallons. So you  
15 would think that for the supply side the price is  
16 pretty close. But nowhere has anyone spoken about  
17 the cost of treating the brine.

18 And Escondido charges \$2.07 per thousand  
19 gallons to treat industrial wastewater, according  
20 to its latest published rates.

21 I'm trying to figure out whether all of  
22 the costs have been captured here so that we can  
23 determine whether an accurate cost comparison has  
24 been performed.

25 MR. BLAISING: And Mr. Hoagland has said

1       yes, the cost is included for brine return as part  
2       of the overall charges in the agreement.

3               MR. BRIGGS:   Okay.   So for \$1.66 per  
4       thousand gallons Palomar gets reclaimed water and  
5       has the brine treated, is that correct?

6               MR. BLAISING:   Your Honor, asked and  
7       answered.   We've answered that question.

8               HEARING OFFICER GEFTER:   Yes.

9               MR. BRIGGS:   Mr. Rowley, is that your  
10       understanding?

11              HEARING OFFICER GEFTER:   Okay.   Go  
12       ahead, Mr. Rowley.

13              MR. ROWLEY:   Yes.   Yeah, this agreement  
14       covers reclaimed water supplied and it also  
15       covers, as noted in section 4.4, the return of  
16       brine to the City.   And the dollars that are  
17       defined in this agreement cover both.

18              MR. BRIGGS:   Okay.   Mr. Hoagland,  
19       Escondido has an industrial user permit program,  
20       is that correct?

21              MR. HOAGLAND:   Yes.

22              MR. BRIGGS:   Has Palomar submitted an  
23       application under that program yet?

24              MR. HOAGLAND:   I believe they have.

25              MR. BRIGGS:   How long will that permit

1 be in effect once it's issued, assuming it's  
2 issued?

3 MR. HOAGLAND: My recollection of the  
4 program is that the permits are issued until  
5 canceled.

6 MR. BRIGGS: Are there any charges that  
7 Palomar will have to pay under the industrial user  
8 program with Escondido?

9 MR. HOAGLAND: Currently our industrial  
10 user program does not have significant fees,  
11 according to my recollection. I haven't been  
12 involved in the issuance of a new industrial  
13 permit, since I've worked for the City a  
14 relatively short time.

15 MR. BRIGGS: What's significant in your  
16 mind?

17 MR. HOAGLAND: Anything.

18 MR. BRIGGS: So your recollection is  
19 there are no fees associated with this permit?

20 MR. HOAGLAND: That's correct.

21 MR. BRIGGS: Is that the case for all  
22 industrial users, or just Palomar?

23 MR. HOAGLAND: As I said, I have not  
24 been involved with the issuance of an industrial  
25 user permit during my short, relatively short

1 tenure with the City, a little over four years.

2 So I can't speak to that. But we don't have a fee  
3 structure for it, so it would be difficult to  
4 impose one.

5 MR. BRIGGS: Does HARRF receive any  
6 federal grants to construct or maintain its  
7 facilities?

8 MR. BLAISING: Your Honor, we would  
9 object to that as being irrelevant.

10 MR. BRIGGS: Actually it is relevant  
11 because under the Clean Water Act if you obtain  
12 federal grants you have to have certain charges  
13 associated with your industrial user program or  
14 the permits that are issued under it are invalid.

15 MR. BLAISING: Your Honor, the  
16 intervenor hasn't submitted information concerning  
17 that, and I object to using the City's witness to  
18 establish his own case.

19 HEARING OFFICER GEFTER: I'm not sure,  
20 I'm sorry, but --

21 MR. BRIGGS: Well, that --

22 HEARING OFFICER GEFTER: -- I'm not  
23 following the relevance here.

24 MR. BRIGGS: Sure. Mr. Hoagland just  
25 testified that there are no user fees assessed

1 under the industrial user program. The Clean  
2 Water Act says that if a publicly owned treatment  
3 works --

4 MR. HOAGLAND: I beg to differ. That's  
5 not what I said.

6 MR. BRIGGS: Oh, what was it that you  
7 said? I'm sorry.

8 MR. HOAGLAND: You asked if there were  
9 application fees.

10 MR. BRIGGS: Are there any other fees  
11 associated with your industrial user program?

12 MR. HOAGLAND: Yes, there are discharge  
13 fees.

14 MR. BRIGGS: What are those discharge  
15 fees as they would apply to Palomar?

16 MR. HOAGLAND: I don't know offhand.

17 MR. BRIGGS: How about approximately?

18 HEARING OFFICER GEFTER: Mr. Briggs,  
19 what is the relevance to this --

20 MR. BRIGGS: Again, it goes to the cost  
21 issue. The industrial user fees have not been  
22 included in this water supply agreement. We're  
23 trying to figure out whether the cost analysis has  
24 been adequately performed, and all the costs that  
25 Palomar is going to pay have been captured in the

1 analysis.

2 MR. BLAISING: Mr. Briggs, it would be  
3 helpful -- are you asking the same question that's  
4 been answered previously with respect to any  
5 return, which my understanding the brine return is  
6 the only discharge that comes from the plant. Are  
7 you asking that question again?

8 MR. BRIGGS: If the City of Escondido's  
9 charge for wastewater treatment is the same as it  
10 is for an industrial discharger then I am asking  
11 the same question.

12 But I don't know what the answer to that  
13 is yet. If it's the same Mr. Hoagland can just  
14 tell me that.

15 MR. BLAISING: I mean it's asked and  
16 answered --

17 HEARING OFFICER GEFTER: Okay, I'm going  
18 to cut off this line of questioning. We're not  
19 making any progress, and it really doesn't add  
20 anything to the record. Let's move on to another  
21 line.

22 MR. BRIGGS: I would like to go back to  
23 staff, if I could. There was an estimate, and I'm  
24 not so sure who would best answer this question  
25 for staff, so I'll let the panel decide that.

1           There was an estimate of approximately  
2     \$300,000 per year for biocide to be used in the  
3     Palomar project. I'm trying to figure out how  
4     much biocide you get for \$300,000 per year. In  
5     other words, how much biocide is Palomar going to  
6     have to be using to adequately treat its cooling  
7     water?

8           HEARING OFFICER GEFTER: What is the  
9     relevance of that question?

10          MR. BRIGGS: Again, it goes to the cost.

11          MR. SCHOONMAKER: I believe that the  
12     estimate for biocides came in appendix A. And it  
13     came as a result of my evaluation of costs. I did  
14     not presume a specific quantity, so I cannot tell  
15     you how many pounds or tons or ounces of biocide  
16     would be required. And obviously it depends on  
17     which biocide you use.

18          MR. BRIGGS: Mr. Rowley, do you know how  
19     much biocide is going to have to be used?

20          MR. ROWLEY: When you say biocides,  
21     you're talking about sodium hypochlorite --

22          MR. BRIGGS: Yeah, that's right.

23          MR. ROWLEY: -- I believe, sort of  
24     things?

25          MR. BRIGGS: That's right.

1           MR. ROWLEY: Those are all listed in the  
2           AFC in the project description. And, by the way,  
3           \$300,000 was also our estimate made independent of  
4           staff's estimate.

5           MR. BRIGGS: Do you know what the  
6           concentration is that will have to be used for the  
7           sodium hypochlorite? My understanding is that  
8           it's so many units of the sodium hypochlorite per  
9           unit of ammonia, is that right?

10          MR. ROWLEY: Actually the criteria for  
11          adding sodium hypochlorite is to maintain the very  
12          slight chlorine residual; and it can be highly  
13          variable depending on specific circumstances,  
14          so --

15          MR. BRIGGS: How much did you estimate  
16          in this particular case?

17          MR. ROWLEY: I'd have to refer to the  
18          AFC section 2, but it's in the table under project  
19          description.

20          MR. BRIGGS: I looked at that; can you  
21          help me find that, please?

22          HEARING OFFICER GEFTER: Wouldn't that  
23          be part of appendix C -- the appendix to the  
24          hazardous materials section where you list all of  
25          the hazardous materials that are stored on-site?



1 MR. ROWLEY: It's probably in both  
2 places. But I know it is in section 2.

3 HEARING OFFICER GEFTER: Okay. Mr.  
4 Briggs, --

5 MR. BRIGGS: Yes.

6 HEARING OFFICER GEFTER: -- after he  
7 answers your question we're going to move on from  
8 this line of questioning regarding costs.

9 MR. BRIGGS: Okay.

10 HEARING OFFICER GEFTER: You're taking a  
11 lot of time for an area that's somewhat peripheral  
12 to our concerns.

13 MR. BRIGGS: Okay.

14 MR. ROWLEY: Table 2.4-5.

15 HEARING OFFICER GEFTER: That's AFC  
16 table?

17 MR. ROWLEY: Right. And those numbers  
18 are all reflective of one month's usage.

19 MR. BRIGGS: 2.4-5 you said?

20 MR. ROWLEY: Table 2.4-5.

21 MR. BRIGGS: Okay.

22 MR. ROWLEY: On page 2-41, section 2 of  
23 the AFC.

24 MR. BRIGGS: I'd like to go back to  
25 staff, if I could. And, again, I don't recall who

1 is most appropriate for this question.

2 For comparison purposes the final staff  
3 assessment soil and water resources appendix A  
4 gave a certain characterization of an air cooled  
5 condenser, a certain footprint, certain height,  
6 certain noise, et cetera, et cetera.

7 I'm trying to figure out what criteria  
8 the CEC Staff used in order to ascertain a likely  
9 footprint of actual 35 cell ACC alternative that  
10 was used in comparison to the wet cooled  
11 alternative.

12 MR. SCHOONMAKER: Yeah, I used the term  
13 criteria, what criteria did we use. Do you want  
14 to --

15 MR. BRIGGS: Yeah, how do you go about  
16 designing the alternative that you used for  
17 comparison purposes in this case?

18 MR. SCHOONMAKER: Okay, that's much more  
19 than a single criterion.

20 MR. BRIGGS: Okay. Let's just talk in  
21 terms of the footprint of the ACC. What criteria  
22 did you have with regard to the footprint?

23 MR. SCHOONMAKER: I'm sorry, I'm having  
24 difficulty relating to the word criteria. I  
25 determined what I think would be a reasonable

1 footprint by determining how many cells would  
2 exist or be required. And basically the size of  
3 the fans and the size of the cells required.

4 MR. BRIGGS: Are you familiar with the  
5 Otay Mesa Power Plant project?

6 MR. SCHOONMAKER: I'm aware of it; I'm  
7 not extremely familiar with it.

8 MR. BRIGGS: Are you aware that my  
9 client has asked the CEC to compare Palomar's  
10 proposed wet cooling design to the Otay Mesa ACC  
11 design?

12 MR. SCHOONMAKER: I'm not aware of that.

13 MR. BRIGGS: Do you know whether anyone  
14 attempted in doing a comparison between wet cooled  
15 and dry cooled to design an ACC system that met --  
16 that was similar to Otay Mesa in terms of its  
17 height, in terms of its footprint?

18 MR. SCHOONMAKER: I did not specifically  
19 look at Otay Mesa when I made the appendix A. For  
20 one reason, it is a different configuration of  
21 power plant. It's also a considerably different  
22 ambient temperature. It's, you know, other  
23 variety of difference that probably exist. So I  
24 did not find a reason to use Otay Mesa experience  
25 to generate appendix A.

1           MR. BRIGGS:  What's the difference in  
2   ambient temperature?

3           MR. SCHOONMAKER:  I have no idea.

4           MR. BRIGGS:  You just said there's a  
5   considerably difference in --

6           MR. SCHOONMAKER:  Yes, it's a high  
7   desert -- low desert location at Otay Mesa.  And I  
8   don't think we would describe Escondido as a low  
9   desert.  There's certainly major differences in  
10  ambient temperatures, wet bulb temperatures, dry  
11  bulb temperatures.

12          HEARING OFFICER GEFTER:  Okay.  I'm  
13  familiar with the Otay Mesa case, as a Commission  
14  decision.  In that case there was no reclaimed  
15  water available.  The only option was dry cooling.  
16  End of question.

17          MR. BRIGGS:  Are you telling me end of  
18  line of question?

19          HEARING OFFICER GEFTER:  Yes.

20          MR. BRIGGS:  What I'd like to try to do  
21  is establish the criteria that were used to make  
22  the comparison in the final staff assessment  
23  between air cooled and dry cooled.

24          Environmental review requires that  
25  reasonable alternatives be considered.  It's my

1 client's position that the Otay Mesa project would  
2 satisfy all the parameters that have been set, all  
3 the objectives that have been set out for the  
4 Palomar project as currently designed.

5 What I'm trying to do is cross-examine  
6 staff on whether they considered putting Otay Mesa  
7 facility at the Palomar site.

8 Or at least use it as a template.

9 MR. KRAMER: I'd object to the question  
10 because we've already established that the  
11 witnesses do not have any particular familiarity  
12 with the details of the Otay case.

13 MR. BRIGGS: Well, if these are all of  
14 the witnesses who were involved in it that leads  
15 me to believe that no one on the panel knows why a  
16 particular design was used, as opposed to Otay  
17 Mesa. Which, if that's the answer, I'm okay with,  
18 but I wanted to give people an opportunity to  
19 formulate their own answer.

20 MR. SCHOONMAKER: There was no good  
21 reason to use Otay Mesa as a template. We have  
22 several templates available.

23 And designing an air cooled condenser is  
24 not something that requires a significant  
25 template. It's pretty straightforward

1 proposition. Air cooled condensers have been  
2 proposed and designed for power plants from San  
3 Francisco, Nevada, et cetera.

4 So there was no need to use Otay Mesa as  
5 a template. Particularly not considering that  
6 that has two steam turbines rather than a single  
7 steam turbine is my understanding. So, totally  
8 different animal.

9 MR. BRIGGS: Ms. Gefter, in order to  
10 avoid questions that are not going to fit with the  
11 direction we may be going, would now be an okay  
12 time for a break, since it's been almost a couple  
13 hours. And that'll give me a chance to sort of  
14 home through some things to try to speed this up.

15 HEARING OFFICER GEFTER: We can take a  
16 recess now for, what, about ten minutes. A ten-  
17 minute recess.

18 (Brief recess.)

19 HEARING OFFICER GEFTER: Back on the  
20 record.

21 MR. BRIGGS: I just have a couple more  
22 questions for Mr. Rowley.

23 Mr. Rowley, in your prefiled rebuttal  
24 testimony you talk about a 70 cell configuration  
25 for an air cooled condenser, do you recall that?

1 MR. ROWLEY: Yes.

2 MR. BRIGGS: Where did you come up with  
3 70 cells?

4 MR. ROWLEY: That is an extreme case  
5 based on actually Mr. Powers' contention that the  
6 air cooled condenser could be as short as 70 feet.  
7 We view that, even if there were site area for an  
8 air cooled condenser, and even if it was the right  
9 choice for this case, which it clearly is not, to  
10 limit its height to 70 feet would cause it to  
11 spread out over many acres.

12 So that's not a case that we would  
13 consider to be in any way realistic.

14 MR. BRIGGS: When you were doing your  
15 analysis based on that configuration what was the  
16 ambient temperature that you assumed for the 70  
17 cell design?

18 MR. ROWLEY: Throughout the Palomar  
19 Energy project we use 110 degrees Fahrenheit for  
20 certain design conditions. That does not mean  
21 that we believe that we are going to see 100  
22 degree ambience frequently at all. But rather  
23 that's a reflection of our experience.

24 For example, at the El Dorado facility  
25 for which I've been responsible for its operation

1 for the last two years, the El Dorado facility has  
2 a design temperature of 108 degrees.

3 Unfortunately whenever it gets over 100 degrees  
4 the El Dorado facility loses up to 40 megawatts,  
5 or nearly 10 percent of its output.

6 So based on that unfortunate experience,  
7 and even after remedial measures at that project  
8 where the air cooled condenser is performing as  
9 well as it's going to perform, we have realized  
10 that to use a typical high temperature is not  
11 prudent.

12 So, for example on our Copper Mountain  
13 project, which is immediately alongside the El  
14 Dorado project, rather than repeating our mistake  
15 of using 108 degrees, we are using 116 degrees at  
16 Copper Mountain for sizing that air cooled  
17 condenser. And that is a project where we believe  
18 that the air cooled condenser is the right choice.

19 So the 110 degree number at Palomar is,  
20 again, not necessarily something that we'd expect  
21 to see in practice, but we don't want to get into  
22 the high 90s or over 100 and lose 40 megawatts of  
23 the plant's output.

24 MR. BRIGGS: What was your assumption  
25 about back pressure?



1           MR. ROWLEY: We estimate that on an  
2 average basis the back pressure for air cooling  
3 would be about one inch higher than for wet  
4 cooling. That's an annual average basis. And on  
5 a hot --

6           MR. BRIGGS: Which puts it where?

7           MR. ROWLEY: -- day basis, it would  
8 be -- the difference would be about 3.5 inches or  
9 more. Those are inches of mercury.

10          MR. BRIGGS: What was the design back  
11 pressure at 110 degrees, do you recall?

12          MR. ROWLEY: The design back pressure at  
13 110, I would have to go back and look at our heat  
14 balances. I don't recall.

15          MR. BRIGGS: You also talked in your  
16 prefiled testimony about the visual impact  
17 analysis that you did in terms of the size of the  
18 ACC.

19          MR. ROWLEY: Yes.

20          MR. BRIGGS: Do you recall that? I want  
21 to refer you to figure 2.4-2 in the application  
22 for certification, if I could.

23          MR. ROWLEY: I'm very familiar with  
24 that.

25          MR. BRIGGS: Does this elevation view

1 figure into your analysis, into your visual impact  
2 analysis when you do a comparison to the ACC?

3 MR. ROWLEY: Yes, it does. And, in  
4 fact, I have prepared a specific use of this  
5 figure to look at wet cooling versus dry cooling;  
6 although I did not include it in my prepared  
7 testimony. I do have it with me if you'd like to  
8 refer to it.

9 MR. BRIGGS: My question is the one that  
10 I have, -- the figure that I have says that it's  
11 not to scale.

12 MR. ROWLEY: That's actually incorrect;  
13 it is to scale.

14 MR. BRIGGS: It is to scale?

15 MR. ROWLEY: Well, this particular  
16 presentation in 2.4-2, I think it's stretched  
17 slightly. But when I was using this for purposes  
18 of looking at wet cooling versus dry cooling I  
19 corrected that. It was just, you know how it can  
20 do when you have a image that you can drag it and  
21 stretch it, for example in PowerPoint. This was  
22 inadvertently stretched slightly and I did correct  
23 that. It's not substantially out of scale; it's  
24 just a little bit out of scale.

25 MR. BRIGGS: Is the corrected version in

1 the record?

2 MR. ROWLEY: It's not, but I have that.

3 MR. BRIGGS: Can we have it added to the  
4 record?

5 MR. ROWLEY: Certainly.

6 MR. BRIGGS: I don't have any other  
7 cross-examination questions.

8 HEARING OFFICER GEFTER: All right.

9 MR. MILLER: We could introduce that  
10 when we get to visual.

11 HEARING OFFICER GEFTER: That would be  
12 fine. Why don't we do -- is that all right, Mr.  
13 Briggs, that applicant will --

14 MR. BRIGGS: That's fine.

15 HEARING OFFICER GEFTER: -- introduce  
16 their corrected version of that figure --

17 MR. BRIGGS: That's fine.

18 HEARING OFFICER GEFTER: -- when we get  
19 to the visual resources?

20 MR. ROWLEY: And the version I was  
21 referring to is the one where it's superimposed  
22 the air cooled condenser on there.

23 HEARING OFFICER GEFTER: All right,  
24 we'll do that. Do you have direct testimony, Mr.  
25 Briggs?

1 MR. BRIGGS: Yes.

2 HEARING OFFICER GEFTER: Would you like  
3 to do that? All the parties stipulate that he can  
4 go forward now with his direct testimony, and then  
5 you can cross-examine Mr. Powers?

6 MR. MILLER: Fine.

7 HEARING OFFICER GEFTER: All right.

8 Would you have your witness sworn.

9 Whereupon,

10 WILLIAM POWERS  
11 was called as a witness herein, and after first  
12 having been duly sworn, was examined and testified  
13 as follows:

14 DIRECT EXAMINATION

15 BY MR. BRIGGS:

16 Q Can you state your name for the record,  
17 please?

18 A Bill Powers.

19 Q And can you give a brief description of  
20 your professional background and your  
21 qualifications?

22 A Yes. I have a professional engineering  
23 license in mechanical engineering, professional  
24 engineer registered in California. Twenty-one  
25 years experience working primarily in the air

1 quality engineering field, primarily with  
2 combustion systems, testing, retrofitting,  
3 upgrading and permitting.

4 Q And what documents are you sponsoring  
5 today? I'll help you by asking whether you're  
6 sponsoring documents 70 through 111?

7 A I'm sponsoring documents 70 through 111  
8 today.

9 Q Mr. Powers, your main contention here is  
10 the ACC alternative hasn't been adequately  
11 considered in this forum, is that correct?

12 A That is correct.

13 Q Have you had an opportunity to look at  
14 the ACC design that's been used by applicant and  
15 staff in making their comparisons to wet cooling?

16 A I have.

17 Q What have you concluded?

18 A I've concluded that both the applicant  
19 and the staff are using generic designs for  
20 unpopulated regions that for that reason are 100  
21 feet high, are using fans that make noise, and  
22 that the analyses that have been done, we have two  
23 very different analyses by the applicant. We have  
24 an analysis by the staff, has concluded that dry  
25 cooling can be anywhere from \$20- to \$40-million

1 greater than net present value compared to the wet  
2 alternative.

3 And that it is my contention that the  
4 assumptions that have been made in these analyses  
5 are non-optimized assumptions, and that as a  
6 result the costs are coming in high and the visual  
7 and noise impacts are also significant.

8 And I'd like to make the point on the  
9 Otay Mesa project is that the point of bringing  
10 that up is that there is a great difference in how  
11 you approach analysis if you're optimizing a  
12 system because you're going to use it, or you are  
13 filling in a regulatory requirement to cost out  
14 something you definitely do not want to do.

15 And what I have been requesting since  
16 March of 2002 is a fair analysis. And by fair I  
17 don't mean exotic. I mean that the Otay Mesa  
18 project, and I would like to correct the CEC  
19 Staff, the climatic conditions at Otay Mesa are  
20 almost identical to the site at Palomar. Their  
21 peak temperatures are essentially identical.

22 The reason for requesting that Otay be  
23 used as a model is that Otay is not two steam  
24 turbines. It is a single steam turbine; it is 277  
25 megawatts. It is slightly bigger, 20 percent

1 bigger than the turbine that will be used at  
2 Palomar.

3 The physical facility, with slight  
4 differences, is essentially identical. And the  
5 climatic conditions are essentially identical.

6 At Otay we have a unit that has been  
7 designed for a height of slightly over 75 feet.  
8 That facility uses 42 fans. I concur with the  
9 CEC's assessment that 36 fans is probably  
10 appropriate for Palomar.

11 I requested an assessment of the 75 foot  
12 height ACC; provided a plot plan to the only three  
13 utility scaled ACC vendors in the United States.  
14 All three corroborated that 75 feet would work on  
15 the site. That they would be ultra low noise fans  
16 to eliminate the noise issue.

17 And when it comes to the CEC analysis,  
18 Otay uses 100 horsepower motors. Your analysis  
19 assumed 200 horsepower motors. Why is this  
20 significant? By that one assumption you add 3  
21 megawatts of parasitic load to your comparison.  
22 And then indicate that over the life of the  
23 project this parasitic load could amount to \$15-  
24 or \$20 million in cost.

25 Well, I understand doing an assessment

1 in a generic fashion; but I think it is fair,  
2 given the tremendous level of effort that the  
3 intervenor has put in, and the request has been  
4 consistent, could you do a comparison that  
5 reflects a project in our county under the exact  
6 climatic conditions this project will face that  
7 appears to be optimized to minimize visual issues,  
8 noise issues; and is conservatively designed to  
9 minimize the efficiency penalty and produce full  
10 power at all site conditions.

11 And I must take issue with Mr. Rowley's  
12 statement about PowerPoint stretching the  
13 diagrams. What I did the other day was I was  
14 thinking we now have received designs from these  
15 three vendors. The only three vendors that make  
16 ACC in the nation.

17 And they have given me a footprint, one  
18 of which overlaid on the Palomar site; it fits  
19 beautifully. And I said, well, what I'd like to  
20 do is take the Palomar elevation view and simply  
21 pencil it in. So you can see, okay, at the site  
22 what would it look like.

23 Well, I looked at the elevation view; I  
24 looked at the 65 foot high cooling tower. And  
25 then I looked over and see that the heat recovery



1 steam generator, which is 40 feet higher, is  
2 almost the same height. And I look at the tag and  
3 it says 102 feet high. But yet it isn't 102 feet  
4 high as you look at it.

5 I look at the air inlet filter housing;  
6 it says it's 826 feet. It's way down here, and  
7 the cooling tower is up here at 815.

8 My point is that that elevation view is  
9 the first time, as an engineer, in my experience  
10 of 21 years, that I've looked at an elevation view  
11 with tagged elevations that says not to scale, and  
12 the big items, the ones that I need to look at to  
13 show you what the visual impact is, are 50 feet  
14 shorter than they actually are.

15 My analogy would be it's almost like a  
16 fun house mirror. Six-foot-high man, we know he's  
17 six foot high, the tag across his -- the line  
18 across his head says he's six foot high. But in  
19 that view he's actually made to appear five feet  
20 high.

21 Now, what I did was -- and this cost me  
22 most of the weekend, by the way, it cost me maybe  
23 an hour to confirm these designs. The air cooled  
24 condenser firms are very quick to provide you --  
25 you can just tell them I want a 75 feet super low

1 noise. You get that response quickly.

2 But when I tried to overlay it on the  
3 elevation view I found that I had to modify the  
4 elevation view to make it to scale. Which I did.  
5 I went ahead and prepared drawings that I would  
6 like to -- I did two things.

7 I prepared drawings that show an  
8 optimized air cooled condenser split into two  
9 sections like Otay, optimizing 75 feet, so you can  
10 see how it would fit beautifully into the Palomar  
11 site.

12 I also prepared their, provided the  
13 original elevation view and explained it is not to  
14 scale. A second elevation view that is to scale.  
15 And then removed the cooling tower and put in a  
16 two -- air cooled condenser. All three of the  
17 vendors said that 36 cells would work at 75 feet  
18 with ultra low noise fans, using 100 horsepower  
19 fans, not 200 horsepower fans.

20 And so we dropped it in so you could  
21 look at it. And this is actually the same request  
22 that I have had of the CEC and the applicant for a  
23 year. Is could we look at air cooling tower and  
24 an optimized air cooled condenser so that we can  
25 form our own opinion.

1 I understand Mr. Rowley's point about El  
2 Dorado. El Dorado, frankly, is in the middle of  
3 nowhere in Nevada. If I were the project manager  
4 and my staff engineer came forward with a 75 foot  
5 design in El Dorado I'd say, what are you doing.  
6 There's no one around here to see this. And if he  
7 came in with ultra low noise fans I'd say back to  
8 school, we're in the middle of nowhere, who cares  
9 how noisy it is.

10 We are in the middle of an urban area.  
11 We must design for that if we are going to be  
12 fair. Otay is actually much more rural than  
13 Escondido. And so again, taking a look in the  
14 global perspective, we live in San Diego. We've  
15 had one power project permitted here by the CEC  
16 ever. That was Otay.

17 So we now have a template in a desert  
18 that uses dry, and has been optimized by the  
19 developer. And so I really would like to provide  
20 this as an exhibit and we have six copies we can  
21 distribute.

22 But I'd also like to do one more thing  
23 and that is the cost issue is really critical. If  
24 the CEC assumes 200 horsepower when we know Otay  
25 is at 100 horsepower. And all three vendors said

1       you can only use 100 horsepower. We now have a  
2       2800 kW load from those fans. The CEC has assumed  
3       6000 kW, 5- to 6000. It just shoots your cost  
4       assessment out the window if you have those types  
5       of assumptions in there.

6               And so if this is the appropriate time I  
7       would like to introduce this as an exhibit.

8               MR. MILLER: Well, I think I need to at  
9       least raise a preliminary objection to this. It  
10      sounds like what has happened is in time since  
11      direct testimony was filed in late March that Mr.  
12      Powers has developed another way of presenting his  
13      case with interaction with three vendors and a  
14      fair amount of engineering work.

15              It seems a little late, to us, to  
16      present this for the first time at the hearing.  
17      So, maybe we can take a look at it, but this is a  
18      classic example of non prefiled testimony.

19              MR. BRIGGS: And my response is that the  
20      work that Mr. Powers did is largely in response to  
21      Mr. Rowley's rebuttal testimony. So that's the  
22      first opportunity that we had to look at it and  
23      try to get a sense of where the CEC is, and where  
24      the applicant actually is.

25              Since it came after the rebuttal

1 testimony, and the documents were already filed,  
2 as he said, he's been working with these folks  
3 last week. It wasn't going to get to you over the  
4 weekend, Mr. Miller.

5 MR. MILLER: I would beg to differ. Mr.  
6 Powers has been in this case since April of last  
7 year. The aesthetics issue, visibility, the  
8 ability to fit the ACC onto the site has been at  
9 issue at least since last August.

10 And so I don't believe that it is  
11 responsive to our rebuttal testimony. It's simply  
12 been part of the case all along.

13 I'd further note that under section  
14 1748(e) of the regulations that a party urging a  
15 different design has the burden of going forward  
16 to show need and feasibility. So it is not our  
17 job to do that. It's been his burden from the  
18 beginning.

19 HEARING OFFICER GEFTER: Let me ask Mr.  
20 Briggs, were these drawings based on existing  
21 information in the record, or did you add new  
22 information to make your drawings?

23 MR. POWERS: The base drawings were  
24 provided in the AFC. There's a plan view of the  
25 site. It has been the applicant's contention that

1 an air cooled condenser would not fit on the site.  
2 Then there is the elevation view that we just  
3 discussed that is an elevation view in name only.  
4 The elevations don't actually line up so you can  
5 make an assessment of it.

6 The remaining -- so we have the base  
7 elevation -- we had the base plan view. And then  
8 a second plan view that just shows where the ACC  
9 drops in. The ACC, by the way, is the same size  
10 as the CEC indicated that it would be, near 36, in  
11 that range.

12 The reason it became critical to do this  
13 is because the last rebuttal testimony, and I have  
14 indicated that this can be designed, and Mr.  
15 Rowley was responding to this, between 70 and 75  
16 feet since day one. And so I appreciate the  
17 applicant saying what would it take to go to 70  
18 feet.

19 But I want to point out that designing  
20 an air cooled condenser for a design temperature  
21 of 110 degrees at a site that has hit 101 degrees  
22 in two years, once, one hour, it has reached 100  
23 degrees twice in three years, is inappropriate.

24 The air cooled condenser, as the  
25 temperature climbs, becomes that much more

1 sensitive, it's performance. And --

2 HEARING OFFICER GEFTER: All right, but  
3 my question was really whether the drawings that  
4 you propose to offer into the record are based on  
5 existing information in the record, because --  
6 and, Mr Briggs, you're shaking your head?

7 MR. BRIGGS: Much of the information  
8 came from corroboration from these vendors that  
9 only came within the last few days, less than a  
10 week ago.

11 In addition, I would just point out that  
12 the not-to-scale view that's in the AFC, we are  
13 just now getting the corrected version. So, since  
14 that document's coming, it would only seem fair  
15 that Mr. Powers could give his version of what the  
16 corrected document should look like.

17 HEARING OFFICER GEFTER: Well, okay.  
18 I'm going to overrule Mr. Miller's objection at  
19 this point. I'm going to accept for  
20 identification only, so we can look at your  
21 drawings, as part of your rebuttal testimony,  
22 would consider it rebuttal.

23 You're welcome to distribute that.  
24 We'll identify it, and then subject to strike  
25 based on additional testimony on that particular

1 drawing.

2 I understand the purpose of your drawing  
3 is to show that you are attempting to rebut the  
4 testimony of the applicant and staff that you  
5 couldn't site an air cooled condenser at the site  
6 the way it's designed.

7 MR. BRIGGS: That's correct.

8 HEARING OFFICER GEFTER: Okay. So we'll  
9 look at it with that in mind. And we'll identify  
10 Mr. -- first of all, how should we identify this?  
11 You're calling this a site arrangement, Mr.  
12 Powers? We're going to identify this as a site  
13 arrangement, Mr. Powers, site arrangement? Is  
14 that how you want to --

15 MR. POWERS: Site arrangement --

16 MR. BRIGGS: Site.

17 HEARING OFFICER GEFTER: Site, yeah, all  
18 right.

19 MR. POWERS: Yes. Site arrangement,  
20 that's fine.

21 HEARING OFFICER GEFTER: Exhibit 112 for  
22 identification, Mr. Powers' proposed site  
23 arrangement. Or is that how you want to  
24 characterize this?

25 MR. BRIGGS: Yes.



1 MR. POWERS: That's fine.

2 HEARING OFFICER GEFTER: All right. And  
3 I'm also going to put in here, as rebuttal or in  
4 rebuttal.

5 MR. POWERS: Okay.

6 HEARING OFFICER GEFTER: All right. And  
7 you've distributed that now to all the other  
8 parties?

9 MR. BRIGGS: That's correct.

10 HEARING OFFICER GEFTER: All right. Do  
11 you have additional questions on this --

12 MR. BRIGGS: Yes.

13 BY MR. BRIGGS:

14 Q Mr. Powers, can you sort of walk us  
15 through what you've added here, please.

16 A Yes. There are six diagrams and an e-  
17 mail communication. But the first diagram shows  
18 figure 2.4-1 from the AFC.

19 The intention of this diagram is to show  
20 the layout of the facility. And the only  
21 modification I've done here is this is looking at  
22 this from a visual standpoint, is to at the base  
23 of the diagram you're looking from the east to the  
24 west. And there's a dimension that's been added,  
25 is that when you're looking from east to west you

1 see that the cooling tower is 340 feet long  
2 approximately.

3 When you look at it from north to south  
4 from that vantage point it's 120 feet across.

5 Now, the second figure is -- what I've  
6 done is I've identified in the upper right-hand  
7 corner dry cooling alternative 1, 36 cells, two  
8 blocks of 3-by-6 cells, 75 feet height.

9 We're now looking down on the wet tower  
10 has been removed, and the two blocks of 3-by-6 air  
11 cooled condensers have been dropped into place.  
12 And at the base you can see in the drawing that if  
13 you're looking from the east at this structure at  
14 this time, you're looking at something that's 285  
15 feet long, but it's a shorter dimension than the  
16 wet tower.

17 On the right-hand side looking from  
18 north to south, you see the dimensions of the two  
19 blocks 128 feet each.

20 I want to point out, too, that these  
21 objects that have been moved between the two  
22 condensers happen to be structures that were on  
23 the site. They will essentially go away. This  
24 square structure is the chemical treatment storage  
25 for the wet tower, so that will not exist, this

1       one here --

2               HEARING OFFICER GEFTER:  What number is  
3       that?

4               MR. POWERS:  What's that?

5               HEARING OFFICER GEFTER:  What number is  
6       that on the --

7               MR. POWERS:  It's number 17; it's the  
8       square --

9               HEARING OFFICER GEFTER:  All right.

10              MR. POWERS:  -- or rectangular structure  
11       in there.

12              HEARING OFFICER GEFTER:  Yes.

13              MR. POWERS:  That's the cooling water  
14       chemical storage.  And then next to it is a large  
15       tank.  That tank is primarily to hold reclaimed  
16       water in case of an emergency for the cooling  
17       tower.  It also holds about 200,000 gallons of  
18       water for fire fighting.

19              But the tank could be a quarter of the  
20       size, or approximately a quarter of the size if  
21       it's for fire fighting only.

22              So that gives you an overview of what a  
23       36 cell air cooled condenser would look like on  
24       the site.

25              It's probably important to note, too,

1       that the condenser is actually farther away from  
2       the south border of the property where the key  
3       observation point 3 is that appears in the visual  
4       resources evaluation.

5               Now, the next figure is the original  
6       figure out of figure 2.4-2, which is the elevation  
7       view for the project. And I want to point out the  
8       only reason that it dawned on me that I was not  
9       looking at an elevation view was that if you look  
10      over to the cooling tower, and this is what I  
11      ended up scaling off of, the cooling tower we know  
12      is 65 feet high. If you look at that 65-feet  
13      height and then just draw line over to the HRSG,  
14      the heat recovery steam generator, the HRSG is  
15      actually 37 feet taller. But in this it looks  
16      like it might be 15 feet taller or something like  
17      that.

18             If you look farther over at the -- you  
19      see the heat recovery steam generator and then you  
20      see what is tagged as number 1. Number 1 is the  
21      air inlet filter for the gas turbine. Elevation  
22      826.5 feet. You come over to the top of the  
23      condenser, elevation 815 feet.

24             So I had to do a lot of work to get this  
25      elevation right so that I could actually use it to

1 show you the scales. Because you've got tags that  
2 are low that have a height that is considerably  
3 higher than the objects next to it. So, that's  
4 the base drawing.

5 The next drawing is my modification to  
6 that drawing. And it was an inconvenient scale;  
7 the reason that I scaled it is 1 centimeter equals  
8 56.5 feet, is that this drawing is so small that  
9 centimeters and millimeters are really what you  
10 have to work in to get accurate. And that just it  
11 was a convenient scale based on the wet tower  
12 height.

13 And what I did was you can see the air  
14 inlet filter has been doubled in height. The HRSG  
15 has been significantly increased in height at the  
16 boiler. And the cooling tower, it actually was  
17 shown, the body of it was shown -- the cone there,  
18 the top cone for the fan was actually shown as  
19 about 20 feet high off the original scale. And  
20 it's been adjusted so that you look at it, you see  
21 what is there.

22 I've also penciled in likely the solid  
23 objects, so you get a sense of what's solid and  
24 what is not solid. And that is the corrected  
25 diagram.

1           Then I took -- the next diagram is  
2       called 75 foot dry cooling configuration  
3       alternative. Corrected elevation view. The  
4       equipment is now to scale. The wet tower has been  
5       removed. The structures have been removed from  
6       between the two towers, but keep in mind that the  
7       larger structures essentially go away.

8           And what this shows you is a real  
9       elevation view of the 75 foot air cooled condenser  
10      meeting the requirements of what the vendors  
11      supply, and how it would look. This is how it  
12      looks, looking from north to south.

13          The next view is -- and the issue came  
14      up, can we go to 70 feet. Well, there is a big  
15      difference going from 75 to 70 feet in terms of  
16      structure. And the way you get there is you  
17      subdivide it one more time. You go to three two-  
18      by-sixes instead of two three-by-sixes.

19          And it's interesting to look at these  
20      diagrams. You can actually look at the diagrams,  
21      I know my impression was, you know, I don't know  
22      if I'd go with a 70 foot height as far as  
23      aesthetic field. But at least I had the  
24      opportunity to evaluate its aesthetic field at  
25      this point.

1           Now, the following five pages are, there  
2       are three air cooled condenser vendors that supply  
3       the utility industry in the United States, GEA  
4       Power Cooling Systems, and I got the communication  
5       with GEA Power Cooling Systems here.

6           The next communication is with Hamon Dry  
7       Cooling. Their communication which describes the  
8       detail of what they can do. It's important to  
9       point out that in this Hamon e-mail they indicate  
10      that 101 degrees Fahrenheit this design will have  
11      a back pressure of 66.5 inches of mercury.

12          Now, air cooled condensers, steam  
13      turbine generators that are hooked to air cooled  
14      condensers are typically designed to withstand a  
15      back pressure of 7.5 to 8 inches. The reason  
16      that's important is because this is an appropriate  
17      design. This allows you to get all 229 megawatts  
18      out of that steam turbine when it's 101 degrees  
19      out. You don't lose any power to ambient  
20      conditions. You need more fuel to produce that  
21      power, but you don't lose it.

22          And finally there's a communication  
23      after these communications with GEA with Marley  
24      Cooling Technologies, which now owns Balcke-Duerr,  
25      which is the other vendor of air cooled

1 condensers.

2 And it's important to point out that  
3 Camone (phonetic) and Marley also sell wet towers.  
4 So they're providing this information, but whether  
5 it's a wet tower or an air cooled condenser  
6 doesn't particularly matter to them because both  
7 of those are markets that they occupy.

8 And so we have all three of the vendors  
9 indicating for that site to get to 75 feet we need  
10 36 cells, 100 horsepower fans, separation, and we  
11 can produce the power we need at the site.

12 And so the issue of aesthetics changes  
13 pretty dramatically. And one other point that I  
14 should make, which I won't be introducing today,  
15 is the issue of the visible plume. And this is  
16 where it plays into the equation is that I'm  
17 comparing a non operational wet tower with an air  
18 cooled condenser when it is operational, under  
19 some conditions in the wintertime you will see a  
20 plume up to 40 feet in height. It's not going to  
21 happen the majority of the time; it will happen  
22 some of the time.

23 But that is a factor that I think needs  
24 to come into play individual analysis.

25 MR. MILLER: Excuse me, are we going to



1 be doing visual again, or we might as well do  
2 visual now, as part of this --

3 HEARING OFFICER GEFTER: Well, we have  
4 visual as a separate topic.

5 MR. MILLER: Yeah. I would just ask  
6 that we not -- I'm fine with doing it now, but I  
7 don't want to do it twice.

8 HEARING OFFICER GEFTER: I don't want to  
9 do it now. I want to do it as a separate topic  
10 because it's very confusing in the record when you  
11 do all the topics together.

12 So, we'll keep it --

13 MR. MILLER: That point being --

14 HEARING OFFICER GEFTER: -- a very  
15 limited area --

16 MR. MILLER: -- we wouldn't be  
17 repeating, in other words.

18 HEARING OFFICER GEFTER: -- regarding  
19 plumes. No.

20 BY MR. BRIGGS:

21 Q One other issue I wanted to ask about,  
22 Mr. Powers, and that is on ammonia --

23 MR. MILLER: Excuse me, Cory, I'm sorry.  
24 I'd just like to, now that we've heard the  
25 testimony on these drawings, I take it, I would

1       like to reiterate my objection and raise a new  
2       one.

3               And that is Mr. Powers developing a  
4       schematic based upon the existing drawing in the  
5       record is one thing. But introducing records of  
6       conversations, obviously hearsay, at this stage of  
7       the proceedings, and also e-mails where we've had  
8       no opportunity to see it before, to talk to the  
9       individuals involved, to get any version on the  
10      facts that they may offer if they were to talk to  
11      us.

12             And not to mention not having them as a  
13      witness in the proceeding, I would object to the  
14      inclusion of those items in the record. If you  
15      feel that you are going to include the drawings, I  
16      would object to including the records of  
17      conversation in the e-mails.

18             HEARING OFFICER GEFTER: So you object  
19      to the portions of the document which is  
20      identified as exhibit 112 that includes telephone  
21      records and that sort of --

22             MR. MILLER: That's correct.

23             MR. BRIGGS: Ms. Gefter, the reason  
24      those records are attached to the documents is to  
25      corroborate the drawing, as made by Mr. Powers.

1 In addition, going to the issue of hearsay, under  
2 the CEC's rules, hearsay, by itself, can't support  
3 a finding, but it can supplement or explain other  
4 testimony. And that's what Mr. Powers is offering  
5 it for.

6 HEARING OFFICER GEFTER: Well, I would  
7 just, at this point we will accept exhibit 112 as  
8 submitted. However, we will give it what weight  
9 it's worth. And, if, you know, the telephone  
10 reports and e-mails, which are just given to us  
11 as, you know, documents from Mr. Powers without  
12 giving the other parties an opportunity to cross-  
13 examine the witnesses or the individuals who had  
14 these conversations, I would expect that the  
15 weight that we give to this information would be  
16 very minimal.

17 MR. BRIGGS: Understand.

18 HEARING OFFICER GEFTER: Do you have  
19 additional direct testimony?

20 MR. BRIGGS: Yes, one final issue.

21 BY MR. BRIGGS:

22 Q Mr. Powers, did you happen to look at  
23 the issue of ammonia as it relates to wet cooling  
24 in your comparison?

25 A Yes, I did. And this relates to the, I

1 did go ahead and calculate, I took the sodium  
2 hypochlorite storage quantity that's shown in I  
3 think table 2.4-5 indicates 2500 gallons a month,  
4 and calculated it to determine what the equivalent  
5 parts per million chlorine concentration would be  
6 in the treated water.

7 And the calculation that I reached was  
8 approximately 3 ppm chlorine. But also, the CEC's  
9 document on use of degraded water, it indicates  
10 that if ammonia is present you will need to add  
11 chlorine at a rate of approximately 20 ppm per ppm  
12 of ammonia to neutralize it and have a free  
13 chlorine residual for your biocide basically to  
14 corroborate you're getting good biological kill.

15 Well, we're dealing with a situation  
16 where we have 25 milligrams, 25 ppm of ammonia in  
17 the reclaimed water. According to the CEC's  
18 document we will need 10 ppm of chlorine or  
19 hydrochloride per ppm of ammonia simply to  
20 neutralize the ammonia before we get any pre  
21 chlorine residual kill. And so --

22 HEARING OFFICER GEFTER: What document  
23 are you referring to from staff?

24 MR. POWERS: That is exhibit, I think  
25 it's exhibit 104. Or excuse me, exhibit 103.

1 It's actually page 4-6 of exhibit 103 where it  
2 states that if you are using -- if the ratio of  
3 chlorine addition to -- it's in the center  
4 paragraph -- the ratio of chlorine addition to  
5 ammonia, the range they give is 8 ppm to a 13 ppm  
6 per ppm of ammonia.

7 And I don't claim to be a water  
8 treatment expert, but when I looked at that I was  
9 thinking, well, when I run the numbers based on  
10 what you're storing for 30 days, I get  
11 approximately 3 ppm. When I look at this comment  
12 in the CEC's document, I get the impression we're  
13 going to need close to 300 ppm in order to  
14 neutralize that ammonia.

15 And so my issue there is, is the CEC's  
16 document correct. Is that the case that we have,  
17 the applicant has severely underestimated the  
18 amount of hypochlorite that will need to be added.  
19 Given the number of conversations we've had about  
20 Legionella and maintaining a good biological kill  
21 rate in the tower. And the fact that we now have  
22 conditions that have been applied to the  
23 applicant, monitoring conditions on application of  
24 the chemical treatment to insure that happens.

25 If we're only adding one-one-hundredth

1 of what we need to get the job done, how does this  
2 work?

3 MR. MILLER: This document was one of  
4 the ones I objected to before. And I believe it  
5 was stated that this was going to be used for  
6 cross. It seems to now be part of the direct  
7 testimony. And, once again, it may be  
8 interesting, but it's coming, as the others are,  
9 well after the prefiled testimony. This issue, it  
10 seems to me, was presented apparently in the AFC.  
11 And so it could have been commented upon in the  
12 direct testimony prefiled.

13 We're going to have a hard time  
14 responding to this because it's the first time  
15 we've heard it.

16 HEARING OFFICER GEFTER: Well, what it  
17 seems to me that what I hear, Mr. Powers, is that  
18 you're actually challenging staff's conclusions in  
19 exhibit 103, which was a report that was issued in  
20 March of 2001. Is that --

21 MR. KRAMER: Well, to clarify, this  
22 looks to be a research paper that was funded, in  
23 part, through the PIER program of the Commission.

24 HEARING OFFICER GEFTER: It's not a  
25 staff -- is it a staff document or not?

1           MR. KRAMER: Well, there's a disclaimer  
2 on the second page which can suggest that the  
3 staff hasn't necessarily blessed any of the  
4 conclusions.

5           HEARING OFFICER GEFTER: Okay, and it  
6 was generated by a PIER grant, a PIER research  
7 grant?

8           MR. KRAMER: Well, it just says the  
9 Commission, but Mr. Eller's guessing that that's  
10 the PIER program.

11          HEARING OFFICER GEFTER: Yeah, this  
12 document seems to be -- it's unclear as to what it  
13 is or who sponsored it. It doesn't appear to be  
14 something that our staff has actually published.

15          So I would just, at this point, I don't,  
16 there hasn't been anything specific to the Palomar  
17 project that you have identified that, you know,  
18 we would get any benefit from relying on in  
19 exhibit 103, as you propose it.

20          So, at this point, I think we're going  
21 to grant Mr. Miller's request to remove this  
22 document from the record. I'm not sure what it  
23 is.

24          MR. BRIGGS: I think Mr. Powers wanted  
25 to talk about the source of the document, so --

1 HEARING OFFICER GEFTER: Okay, Mr.

2 Powers.

3 MR. POWERS: This is actually somewhat  
4 of a humorous story, because --

5 HEARING OFFICER GEFTER: All right.

6 MR. BRIGGS: Don't tell the humor, just  
7 the --

8 HEARING OFFICER GEFTER: Yeah, just give  
9 us the bottom line.

10 MR. POWERS: I was invited by the CEC to  
11 review the document.

12 HEARING OFFICER GEFTER: All right.

13 MR. POWERS: And so I was reviewing it  
14 as a favor to the CEC, because I'd previously  
15 provided a review of their alternative cooling  
16 document. And when I reviewed it I stumbled  
17 across this paragraph that said we will need ten  
18 times the ppm chlorine to ammonia.

19 And to back up, when I saw that I was  
20 somewhat frustrated with the CEC, because we have  
21 had CEC Staff working on this project for a year,  
22 we're dealing with -- but, that's beside.

23 The point is --

24 HEARING OFFICER GEFTER: Okay, no, my  
25 question to you is who generated this document.



1 When you say CEC, there's staff, there are  
2 contract people, there are people who have  
3 research grants.

4 MR. BRIGGS: Who asked you to review the  
5 document?

6 HEARING OFFICER GEFTER: Was it a --

7 MR. POWERS: Joe O'Hagan.

8 HEARING OFFICER GEFTER: Okay.

9 MR. POWERS: And I said, Joe, I found  
10 something in this document that is relevant to the  
11 case. I don't want to use it unless you give me  
12 authority to use it. And Joe said, it's fine for  
13 you to use it --

14 HEARING OFFICER GEFTER: Okay, well, Joe  
15 is -- I'm sorry, Mr. O'Hagan is a member of the  
16 staff. He's not management. And he's not the  
17 Commission, you know. And if this is just a  
18 report or a study, it doesn't have the weight of  
19 an official document from the Energy Commission.

20 So we're going to remove it from the  
21 record and we can move on. Thank you.

22 MR. BRIGGS: Ms. Gefter, Mr. Powers is  
23 telling me that exhibit 106 actually says the same  
24 thing.

25 HEARING OFFICER GEFTER: Well, that's --

1 and exhibit 106 is?

2 MR. BRIGGS: (Inaudible) techni --  
3 study.

4 HEARING OFFICER GEFTER: When we get to  
5 the public health section there are witnesses who  
6 are available to testify about chlorination as a  
7 biocide process. And so we will ask the live  
8 witnesses to testify from their expert knowledge  
9 on this topic.

10 MR. BRIGGS: Sure.

11 HEARING OFFICER GEFTER: Let's move on  
12 to any other direct testimony that you have.

13 BY MR. BRIGGS:

14 Q So, Mr. Powers, can you just summarize  
15 for me what your findings were with regard to  
16 capital costs for ACC versus wet cooled, and also  
17 for operating costs in the comparison?

18 A I did not have a major disagreement with  
19 the capital costs that were used. The applicant  
20 actually provides, initially talks about a 36 cell  
21 ACC as their estimated size for this site. CEC  
22 talks about 35 to 40 cells.

23 There's a slight difference between  
24 their capital cost estimates, but I think both  
25 estimates for wet and for dry are probably in the

1       ballpark.

2               The only issue I had with the ACC cost  
3       estimate was that because you use a steam turbine  
4       with a slightly higher back pressure rating with  
5       an ACC it's a simpler steam turbine. It simply  
6       has fewer stages in it. And it is considerably  
7       cheaper, approximately \$2 million cheaper. That's  
8       an adjustment, a \$2 million credit when you use  
9       ACC as a result of the steam turbine generator.

10              When we talk about the costs, operating  
11      costs, I think that the CEC has acknowledged that  
12      the applicant has indicated that we used the  
13      incorrect cost; the CEC is actually using about  
14      \$375 per acre foot. That's been adjusted now to  
15      \$540 per acre foot. So that will tighten the cost  
16      difference between the two.

17              The CEC's evaluation assumes an  
18      inefficiency, or a thermal penalty of using air  
19      cooling at the site of approximately 1.8 percent.  
20      That is a very precise number, but it's based  
21      apparently on a very generic set of assumptions.

22              The Sutter site, for example, which is  
23      in the record the CEC estimated 1.5 percent there;  
24      that's a much hotter spot. And so making an  
25      adjustment simply from 1.8 to 1.5 tightens it

1 further.

2 Then we have the issue of load, which I  
3 talked about the fans adding 3 megawatts of load  
4 simply by making the assumption that they're 200  
5 horsepower, when in fact they're 100 horsepower.

6 Another issue with load is that it  
7 appears the CEC assumed that this was a  
8 conventional tower when it calculated pump head.  
9 This a plume abatement tower; it is double the  
10 height. You have double the pumping head, and you  
11 have double the electricity cost to pump that  
12 water. Adds almost another megawatt of load to  
13 the pumping cost.

14 And when you adjust all of these  
15 operating costs to reflect, talking now about  
16 power, when just making these adjustments actually  
17 swings the parasitic load analysis slightly in  
18 favor of air cooled condensing. Meaning instead  
19 of losing \$20 million of potential sales over the  
20 life of this project, you're actually up about a  
21 little less than a million dollars as a result of  
22 using air cooling.

23 The other issues that were raised, if I  
24 can get the table in the FSA, the operating cost  
25 table, --

1 (Pause.)

2 MR. POWERS: Okay, this is it. Talked  
3 about the parasitic load, water cost, fuel cost.  
4 Fuel cost actually goes down. And as you adjust  
5 the efficiency penalty you assume 1.8; well,  
6 you've got this fuel cost penalty of \$1.3 million.  
7 It turns out with an optimized design your fuel  
8 penalty is 1 percent. That cost drops by \$600,000  
9 a year.

10 And so just by using that template that  
11 we now have, your operating costs swing  
12 dramatically in favor of dry cooling. Your  
13 capital cost of, you know, there isn't a major  
14 change in those capital costs.

15 But then when you do your -- much is  
16 made about the net present worth, what's the net  
17 present worth of wet versus dry. Well, running  
18 these, making those adjustments, legitimate  
19 adjustments, you end up with a net present worth  
20 of wet cooling at \$48 million. The net present  
21 worth of dry cooling at \$47 million.

22 I know that my attorney's line of  
23 questioning earlier was about the cost of  
24 discharge. Well, if we use the discharge,  
25 industrial discharge fee that Escondido charges

1 other industrial wastewater discharges, that now  
2 puts the net present value of the wet cooling  
3 project at \$55 million. And the air cooling at  
4 \$47 million.

5 And so --

6 HEARING OFFICER GEFTER: Wait a minute.

7 MR. POWERS: -- the point I'm making is  
8 that --

9 HEARING OFFICER GEFTER: Just a minute,  
10 there's an objection to your comment.

11 MR. BLAISING: Objection. He's basing a  
12 hypothetical on something that we've included and  
13 we've answered, and he continues on with a  
14 hypothetical, assuming facts that are not set  
15 forth in the record.

16 HEARING OFFICER GEFTER: Would you --

17 MR. BRIGGS: We've said that he did his  
18 analysis based on the number that you gave, and  
19 also two other numbers that might have been used.  
20 Those numbers are in the record. That's all.

21 MR. BLAISING: I heard a continuation of  
22 if we did this it results further in this.

23 HEARING OFFICER GEFTER: Again, we will  
24 look at the testimony based on the entire record.

25 MR. BRIGGS: That concludes our direct.

1 HEARING OFFICER GEFTER: Thank you. Are  
2 you available now for cross-examination?

3 MR. POWERS: Yes.

4 HEARING OFFICER GEFTER: Mr. Miller.

5 CROSS-EXAMINATION

6 BY MR. MILLER:

7 Q First, just back up here. Got a few  
8 pages to go back to.

9 Mr. Powers, as far as your background,  
10 prior work in engineering and air quality, have  
11 you ever had responsibility for developing a  
12 project? Designing it and developing a power  
13 plant project?

14 A I have not had responsibility for citing  
15 a power plant.

16 Q Would it be your testimony that the  
17 kinds of analyses that were done for other power  
18 plants would also show a relative parity of cost  
19 of the ACC versus the wet facilities?

20 MR. BRIGGS: Objection, vague as to  
21 other power plants.

22 MR. MILLER: Well, I'll ask the question  
23 a different way.

24 BY MR. MILLER:

25 Q If this plant is actually less expensive

1 if it were to use ACC, why would there not be many  
2 other plants using ACC rather than wet cooling?

3 MR. BRIGGS: Objection, that calls for  
4 speculation about what other plants would decide.

5 MR. MILLER: I have no further cross-  
6 examination questions. I do have some rebuttal  
7 testimony that I would like to offer.

8 HEARING OFFICER GEFTER: We'll do that  
9 after we go through the cross-examination process.  
10 Staff.

11 MR. KRAMER: Just a couple questions.

12 CROSS-EXAMINATION

13 BY MR. KRAMER:

14 Q A couple minutes ago you were describing  
15 your calculations of relative and present value  
16 costs of wet cooling and ACC. But I don't recall  
17 seeing that reflected anywhere in your written  
18 testimony. Did I miss it?

19 A It is not in my written testimony.

20 Q Okay.

21 A Actually, I should clarify. Okay, in  
22 the written testimony, earlier documents that do  
23 deal with the issue of cost I specifically -- I'd  
24 have to refer to the testimony to see if I did  
25 address the issue of -- definitely did not address



1 the issue of net present value in the base  
2 testimony.

3 Q So there's probably no table that we can  
4 easily compare with staff's table or the  
5 applicant's have, to try to figure out why their  
6 conclusion's different?

7 A Could you repeat the question?

8 Q Your information is not presented in  
9 anything like a table, for instance table A in  
10 appendix A to the staff assessment?

11 A No, I have not put the findings in a  
12 table form.

13 Q Okay. Did I hear you suggest that the  
14 ACC unit for this project could be optimized both  
15 to the relatively low profile visually, low noise,  
16 efficient and at a relatively low cost?

17 A The first three items, correct, low  
18 profile, low noise, efficient. I have no quibble  
19 with the cost. The costs as estimated in both the  
20 applicant and the CEC's documents are in the  
21 appropriate range for capital costs.

22 In fact, the CEC does indicate the ACC  
23 would be in the range of 35 to 40 cells. The  
24 design shown is for 36 cells.

25 Q Do you understand the design the CEC was

1 considering to be this design that you have in  
2 mind where you've optimized for everything but  
3 cost?

4 MR. BRIGGS: Can I ask you to repeat the  
5 question, because part of it faded out.

6 BY MR. KRAMER:

7 Q Okay. The design that the CEC -- you  
8 understand the CEC to have in mind upon which it  
9 based its cost estimate, did you understand that  
10 design to have optimized for the three factors  
11 that you've optimized for?

12 A I understand it was not optimized. I  
13 think the CEC Staff member said that he was  
14 unfamiliar with Otay Mesa, he was unfamiliar with  
15 the configuration. And I did make the point that  
16 Otay Mesa is an interesting situation because the  
17 developer actually wanted to do it. He actually  
18 wanted to optimize ACC to the site, which makes it  
19 an ideal template to look at, a site that has  
20 essentially the exact same climatic conditions as  
21 that site.

22 Q Otay Mesa is a smaller project than this  
23 one, correct?

24 A It is not. The steam turbine generator  
25 at Otay Mesa is rated at 277 megawatts. This

1 steam turbine generator is rated at 229 megawatts.

2 Q Okay, but overall is the total output of  
3 each project similar or --

4 A I'm not sure about what the total output  
5 of the projects are. The developers are sometimes  
6 vague in this. The issue is that the steam  
7 turbine generator has been designed to be able to  
8 produce 277 megawatts. Whether it produces that  
9 will be dependent on whether, I think Otay is  
10 authorized to expand its duct firing to take  
11 advantage of that.

12 Q Okay. Let's turn to the State Water  
13 Board's resolution 75-58. Did I read your  
14 testimony correctly to suggest that you interpret  
15 that resolution to prohibit, just flat out  
16 prohibit the use of fresh water at power plants?

17 MR. BRIGGS: Objection, this question is  
18 irrelevant. Mr. Powers' interpretation of the  
19 State Water Resources Control Board's resolutions  
20 has no bearing on this Commission.

21 MR. KRAMER: May we --

22 HEARING OFFICER GEFTER: Objection  
23 sustained.

24 MR. KRAMER: May we strike that portion  
25 of his testimony then as irrelevant?

1 MR. BRIGGS: I think --

2 MR. KRAMER: I'd be glad to identify it.

3 MR. BRIGGS: I think we'd need to see  
4 what portion of the testimony you interpreted that  
5 way, Mr. Kramer.

6 MR. KRAMER: On page 3 of his corrected  
7 testimony, where it says: SWRCB policy 75-58  
8 essentially prohibits power plants from using  
9 fresh surface water for cooling.

10 MR. POWERS: I think the word  
11 essentially is important here. What that caveat  
12 means is that there may be certain circumstances  
13 where it would be considered.

14 MR. BRIGGS: Mr. Powers, were you just  
15 giving your lay person's interpretation of the  
16 resolution?

17 MR. POWERS: Yes.

18 HEARING OFFICER GEFTER: Mr. Kramer,  
19 let's move on. The witness' analysis of the  
20 resolution is not of particular relevance to the  
21 Committee.

22 MR. KRAMER: No further questions.

23 HEARING OFFICER GEFTER: Thank you.

24 Mr. Miller, you have some rebuttal testimony?

25 MR. MILLER: Yes, I do.

## 1 DIRECT EXAMINATION

2 BY MR. MILLER:

3 Q Mr. Rowley, you've heard Mr. Powers'  
4 testimony with regard to the ability to cite the  
5 ACC facility on the Palomar site and with regard  
6 to cost calculations. Would you comment on those  
7 topics, please?

8 A Yes. First of all, I would say that  
9 Sempra Energy Resources has shown its objectivity  
10 with regard to wet cooling versus dry cooling by  
11 virtue of the fact that we consider both options  
12 for all of our projects. And we have indeed  
13 selected dry cooling for two of our projects, the  
14 El Dorado project and Copper Mountain project.

15 In the testimony from Mr. Powers he  
16 suggested that we do a different sort of analysis  
17 for when we don't want it versus when we do want  
18 it. That's simply not the case. We do the  
19 analysis and the chips fall where they may. And  
20 that's the result and I would certainly stand by  
21 my testimony that we've done an objective analysis  
22 considering dry cooling for this Palomar Energy  
23 project. And that wet cooling with reclaimed water  
24 is the right choice.

25 Mr. Powers suggests that -- actually

1 states explicitly on page 3 of his rebuttal  
2 testimony, quote, "the ACC or air cooled condenser  
3 will not cause a reduction in steam turbine  
4 generator output at any time."

5 The reality is that that's simply not  
6 true. Dry cooling always results in higher steam  
7 turbine back pressure; and higher steam turbine  
8 back pressure always results in diminished steam  
9 turbine output. This is governed by basic  
10 thermodynamics, the difference between wet bulb  
11 temperature and dry bulb temperature, and to state  
12 otherwise is really to deny laws of nature.

13 In fact, the 1.5 to 5 percent efficiency  
14 loss cited in Mr. Power's own testimony, in his  
15 direct testimony on page 14, is the direct result  
16 of the diminished output.

17 Mr. Powers states in his direct  
18 testimony on page 1 that there are two air cooled  
19 plants in California, the Sutter project and the  
20 Crockett project. He also states that 70 feet is  
21 the optimized minimum height typically quoted by  
22 air cooled condenser vendors.

23 However, he fails to mention that air  
24 cooled condenser height is directly related to  
25 steam turbine output. For example, he states that

1 the Crockett air cooled condenser is 70 feet tall.  
2 But he fails to mention that the Crockett steam  
3 turbine is only 60 megawatts; it's only about  
4 one-quarter of the size of the Palomar Energy  
5 project ACC.

6 He mentions Sutter as relevant, but  
7 fails to mention that the Sutter air cooled  
8 condenser is 109 feet tall. Now, the Sutter  
9 project has a 180 megawatt steam turbine, so it's  
10 somewhat relevant to Palomar. Palomar has a 229  
11 megawatt steam turbine. So at least the two  
12 machines are on the same order of size.

13 Pardon me, the Sutter project has a 160  
14 megawatt steam turbine. And, again, it's air  
15 cooled condenser is 109 feet tall.

16 He states that the Otay Mesa air cooled  
17 condenser will be 76 feet tall. The document that  
18 he references in his testimony, when you look at  
19 the figure at the end of his rebuttal testimony  
20 entitled project description figure 2, this figure  
21 it says the source Otay Mesa Generating project  
22 application for certification supplement, 99-AFC-  
23 05. That's the original application for  
24 certification for the Otay Mesa project. Its air  
25 cooled condenser is sized for a 180 megawatt steam

1 turbine, not the larger steam turbine that he  
2 suggested in his oral testimony.

3 Furthermore, the Otay Mesa project is of  
4 limited relevance to begin with because it doesn't  
5 exist. It exist only on paper, whereas Sutter is  
6 the project that's actually been built and is in  
7 operation. Another problem with Mr. Powers'  
8 testimony is that, while it's true that this  
9 diagram shows that the air cool condenser height  
10 has a dimension of about 76 feet tall, a review of  
11 the document shows that that is not the overall  
12 height of the air cool condenser.

13 That's the height up to the top of the  
14 heat exchange surface. There are large steam  
15 ducts that raise the overall height of the air  
16 cool condenser. And in my testimony I've always  
17 referred to the overall height. So when we talk  
18 about 100 feet tall, for example, we're talking  
19 about the overall height, including the large  
20 steam ducts on top of the air cool condenser.

21 The Otay Mesa project both in this  
22 document, as well as other documents that I've  
23 reviewed on Otay Mesa expanding years are all  
24 consistent that the overall height of the air cool  
25 condenser is about 83 feet tall, not 76 feet tall.



1           It probably would be a good time, you  
2       know, I was going to distribute this diagram as  
3       part of our testimony on visual, since it really  
4       is sort of counterpoint to the diagram that  
5       Mr. Powers' distributed that we should go ahead  
6       and do that now.

7           HEARING OFFICER GEFTER:  We're going to  
8       go off the record for a minute.

9           (Off the record.)

10          MR. KRAMER:  Did this get a number?

11          HEARING OFFICER GEFTER:  Yes.  We're  
12       going to number this.  We have a, what is it, an  
13       elevation scale from the Applicant.  So this would  
14       be an Applicant Exhibit, and it would be 40,  
15       Exhibit 40.

16          MR. ROWLEY:  This is Exhibit 40?

17          HEARING OFFICER GEFTER:  Mr. Miller, do  
18       you want to identify this exhibit for us.

19          MR. MILLER:  Exhibit 40 is a line  
20       drawing showing elevation looking west with screen  
21       terrain from the Palomar Energy Project.

22          MR. ROWLEY:  First of all, the  
23       adjustment needed to correct this elevation to  
24       make it to scale, at least with respect to the  
25       height of the stack on the HRG, and also the

1 height of the cumulative wet cooling tower.

2 That's a very slight adjustment.

3 And it's to make sure that the distance  
4 between the wet cooling tower and the stack  
5 represents the correct aspect ratio, in other  
6 words it should scale properly from the center of  
7 the stack to the center of the cooling tower  
8 versus ground level to the top of the wet cooling  
9 tower, and ground level to the top of the stack.

10 And that requires just a very minor  
11 adjustment to accomplish that. The top picture of  
12 the three versus proposed plume-abated cooling  
13 tower shows the proposed, the dark lines that you  
14 can see arcing across are the ridge lines that are  
15 on the east and west sides of the project.

16 The higher ridge line is the one on the  
17 west side of the project that separates the  
18 project from the ERTC Business Park, as well as  
19 the residence that's further west. And then the  
20 lower parking line is the ridge line on the east  
21 side of the project site.

22 The middle picture there, the air cooler  
23 and condenser at 100 feet high, as I've estimated  
24 in my testimony, and that's 300 feet wide. It  
25 would also be 300 feet deep into the paper and 100

1 feet high. The bottom picture is an air cool  
2 condenser, the same height as the Otay Mesa  
3 Project, 83 feet tall.

4 You can see that the area in yellow,  
5 that is the portion of the project that rises  
6 above the ridge line, is many times greater for  
7 either air cool condenser case and for the cooling  
8 power case. I would also point out that one of  
9 the very earliest inputs that we received from the  
10 community was to keep the project as low profile  
11 as possible.

12 That was reiterated by the Designer  
13 Review Board. And I believe we accomplished that  
14 with the proposed design, and that either one of  
15 these air cool condenser options could go directly  
16 against the input that we received from the  
17 community. Leaving that drawing now, just a  
18 couple more things to point out.

19 On Mr. Powers' drawings, first of all  
20 I'd point out that even though there's a Burns  
21 McDonnell logo on each one of these, I'm not sure  
22 it's his intention to attributed (indiscernible)  
23 to Burns and McDonnell.

24 MR. BRIGGS: That is correct.

25 MR. MILLER: Just in fairness to Burns

1 and McDonnell, this is going to be in the Formal  
2 Administrative Record. It might be that we could  
3 agree to have a notation put on, or maybe just  
4 white it out, or something to that effect so that  
5 they're not unhappy with us.

6 MR. BRIGGS: Mr. Powers has modified  
7 those drawings.

8 MR. ROWLEY: In the plan view labeled  
9 "dry cooling alt-1."

10 HEARING OFFICER GEFTER: Okay. Exhibit  
11 112.

12 MR. ROWLEY: If you'll turn to that  
13 page.

14 MR. BRIGGS: What page is that?

15 MR. ROWLEY: Dry cooling alt-1, 36  
16 cells, two blocks, 75 feet height.

17 HEARING OFFICER GEFTER: That's the  
18 second page of Exhibit 112, right?

19 MR. ROWLEY: That's correct. It shows  
20 that the air cool condenser has been split into  
21 two, certainly we would agree with that, that if  
22 the air cool condenser was significantly lower  
23 than 100 feet, in this case 83 feet, not 75 as  
24 indicated, that it would have to be split into at  
25 least two pieces.

1           The problem here, and this really is the  
2       design challenge for Palomar Energy Project in  
3       general, not just with respect to cooling, you'll  
4       note that one block is much further south than the  
5       other block. One block is fairly tight and close  
6       to the steam turbine. The steam turbine is --  
7       it's hard to read the numbers on this.

8           How can I identify the steam turbine  
9       here for you? I could point to it.

10          HEARING OFFICER GEFTER: You could point  
11       to it. Okay. Mr. Rowley is pointing to the  
12       middle of the diagram with his finger to show us  
13       where the turbine is.

14          MR. ROWLEY: In fact, off to the left,  
15       it's hard to read, but it says steam turbine deck.

16          HEARING OFFICER GEFTER: Yes, I see  
17       that. It's really pretty much in the middle of  
18       the diagram.

19          MR. ROWLEY: So one of the air cool  
20       condenser modules appears to be within 100 feet of  
21       the steam turbine. However, the other module is  
22       over 300 feet. I would say close to 400 feet  
23       away. And that's simply not something that you  
24       can do. The pressure leaving the steam turbine  
25       is near absolute zero. I mean it's just extremely

1 sparse steam.

2 It requires very large ducting to move  
3 steam at that low pressure over any distance. So  
4 air cool condensers, when they are employed, are  
5 always immediately next to the steam turbines.  
6 Put at 400 feet away would require a steam duct of  
7 enormous size. I'm not sure how big it would be,  
8 but it would be well -- I mean the norm would be  
9 no bigger than perhaps 16 or 20 feet in diameter.

10 This would be much large than that, and  
11 just not practical. So I'm not sure how, you  
12 know, we've never really directly addressed this,  
13 how would you fit ten pounds of air cool condenser  
14 into a five pound bag. It just doesn't work on  
15 the site. That's one of the concerns that we had.

16 Although, again, our primary concern is  
17 really how the air cool condenser goes directly  
18 contrary to one of our primary design objectives  
19 of keeping the plant as unobtrusive as possible  
20 and down below the ridge lines. I think I already  
21 explained why we use the temperature of 110  
22 degrees fahrenheit.

23 That's not a temperature that we expect  
24 the plant to get to, the ambient to get to.  
25 Frequently, if at all, but rather it's a prudent

1        thing to do based on our experience at El Dorado.  
2        Mr. Power states that an air cool condenser could  
3        be provided with the ultra low no expands. That  
4        its height could be reduced to minimize visual  
5        impact.

6                And these statements are simply in  
7        conflict with his other statements that the  
8        condenser could fit on Palomar Energy sites, and  
9        that there would be little or no change in the  
10       cost of electricity produced since both of these  
11       designed parameters would tend to make the air  
12       cool condenser much larger.

13               He stated that the steam turbine would  
14       be cheaper, other than more expensive. The  
15       problem here is that an air cool condenser  
16       actually works quite well when the ambient  
17       temperature is low. So the air cool condenser can  
18       achieve a back pressure of two or two and a half  
19       inches of mercury when the ambient temperature is  
20       low, 60 degrees, 70 degrees, something like that.

21               So to make the steam turbine cheaper  
22       would suggest that the developer would live with  
23       high back pressure all year round. That we would  
24       make the steam turbine with fewer stages and make  
25       the tail end, the exhaust end of the steam

1 turbine, smaller.

2 That would be taking what we've  
3 estimated as a seven megawatt average year round  
4 loss of output and making that number much, much  
5 larger by designing the plant to have a highback  
6 pressure all the time instead of on just the hot  
7 days. So the reality is the steam turbine  
8 actually would not be cheaper, but rather if we  
9 wanted to try to maintain the same plant output,  
10 that the front end of the steam turbine would be  
11 larger, and it would be, therefore, more  
12 expensive.

13 And lastly, I'd just point out that air  
14 cool condensers have their -- they have their --  
15 cooling tower vendors have their wet tower  
16 division and their dry tower division, and they  
17 certainly compete with each other in getting data  
18 from the air cool condenser dry division. It does  
19 not mean that what you're getting is objective.

20 They're still trying to sell their  
21 product. And I think that the data provided to  
22 Mr. Powers reflects that. Thank you.

23 MR. BRIGGS: Ms. Gefter, will I have an  
24 opportunity, either now or later, to ask  
25 Mr. Rowley a few questions about the exhibit that



1 he did send around a few moments ago?

2 HEARING OFFICER GEFTER: Yeah.

3 MR. BRIGGS: When would be the  
4 appropriate time.

5 HEARING OFFICER GEFTER: Let me just  
6 find out if Staff has some rebuttal testimony, and  
7 then you can voir dire the witness on the  
8 document, Exhibit 40 that you refer to.

9 MR. BRIGGS: All right.

10 MR. KRAMER: I have a little bit in the  
11 nature of rebuttal, and a little bit in the nature  
12 of redirect.

13 REDIRECT EXAMINATION

14 BY MR. KRAMER:

15 Q Let me ask Mr. Latteri, you were asked  
16 about whether you had attended Commission  
17 workshops on the subject of cooling power plant.  
18 And I believe you answered yes. Do you want to --  
19 what workshop did you understand, the Hearing  
20 Officer was asking the question, for her to be  
21 referring to?

22 A I thought the workshop that the Hearing  
23 Officer was referring to was the Public Workshop  
24 on the Palomar Facility held in about March of  
25 2002.

1 HEARING OFFICER GEFTER: No, I was  
2 referring to the workshop held by Commissioner  
3 Laurie in February of 2002 I believe it was, on  
4 whether he was -- the citing Committee conducted  
5 that hearing.

6 MR. BRIGGS: Mr. Gefter, we can't hear  
7 you at the moment.

8 HEARING OFFICER GEFTER: I'm sorry. I  
9 was referring to a workshop on water, West Supply  
10 Water Quality that was conducted by the Commission  
11 Citing Committee. Commissioner Laurie was  
12 presiding at that time. It was at the Energy  
13 Commission in February of 2002 I believe.

14 MR. LATTEI: We have a date here of  
15 February 8th, 2001.

16 HEARING OFFICER GEFTER: 2001 perhaps.

17 MR. LATTEI: No, I did not attend that  
18 hearing.

19 HEARING OFFICER GEFTER: Okay. So you  
20 did not attend that hearing. All right.

21 MR. KRAMER: Let me ask, is that the  
22 same hearing that's referred to on Exhibit 82,  
23 which is a water supply issue workshop summary?

24 HEARING OFFICER GEFTER: Is that right,  
25 Mr. Powers, that's one of your exhibits?

1 MR. BRIGGS: Yes, that's Exhibit 82.

2 HEARING OFFICER GEFTER: I think that's  
3 right. That's the one. I don't know the date,  
4 June 5th, but the workshop was conducted in  
5 February of 2001. That's right. I think this is  
6 the same document.

7 BY MR. KRAMER:

8 Q Okay. Mr. Latteri, have you ever been  
9 told about this workshop by your supervisor, and  
10 the effect, if any, it had on the Staff's policy  
11 with regard to analyzing the use of water in power  
12 plants?

13 A Not to my recollection.

14 MR. KRAMER: Okay. The reason I'm  
15 bringing this up is implied, Ms. Gefter, in your  
16 question was, there's an implication that there  
17 was a strong policy in favor of the use of dry  
18 cooling. And based on this exhibit of the  
19 Intervenor's I think that's -- it may not be an  
20 accurate statement of the results.

21 And I just wanted to point to the last  
22 page of that exhibit. It does mention dry  
23 cooling, but it also mentions waste water. And so  
24 I wanted to make sure that none of us here were  
25 under a misconception as to the nature of what

1       resulted from that policy.

2               If you will, it's a late objection I  
3       suppose to your question as misstating the  
4       evidence perhaps.

5               HEARING OFFICER GEFTER:   Okay.   First of  
6       all, I appreciate that you found in Exhibit 82,  
7       the way we have Exhibit 82 described here my  
8       understanding it was docketed June 14th, 2001.  
9       And the way we have described as June 5th, 2001.  
10      But that is the summary of the workshop.

11              MR. KRAMER:   That's the date of the  
12      document.

13              HEARING OFFICER GEFTER:   Yeah.

14              MR. KRAMER:   June 5th.

15              HEARING OFFICER GEFTER:   Right.   Okay.  
16      And I may have mischaracterized the last paragraph  
17      of that document, but that's what I was remember,  
18      because I didn't have it in front of me.   But I  
19      appreciate you pointing that out.   And in fact,  
20      the document speaks for itself, the language at  
21      the end of the document speaks for itself.

22              And it indicates that the Energy  
23      Commission should work worth the State Water Board  
24      to develop policy.   But as far as we know the  
25      Commission and the State Water Board have not

1 followed through on that particular recommendation  
2 at this point. Because I don't believe the  
3 Commission ever adopted that recommendation from  
4 the committee.

5 MR. KRAMER: I've not heard anything  
6 about it.

7 HEARING OFFICER GEFTER: Right. Okay.

8 MR. KRAMER: I suspect it would take  
9 quite a while.

10 HEARING OFFICER GEFTER: Thank you.

11 MR. KRAMER: I just have one more  
12 question for Mr. Schoonmaker then. In your  
13 exhibit -- or appendix A, when you were estimating  
14 the cost of an ACC, were you estimating an ACC  
15 there was optimized for the three factors that  
16 Mr. Powers described at the size, noise and  
17 efficiency? And do you -- please answer that  
18 question and then I have one more.

19 MR. SCHOONMAKER: No. It's not --  
20 they're not simultaneously optimizable. They're  
21 not consistent, so you have to optimize for one or  
22 the other. What I was optimizing for was a design  
23 that would be consistent with designs that we have  
24 seen in the past using typical applicants  
25 economics.

1 MR. KRAMER: So were you optimizing for  
2 cost, is that what you're saying?

3 MR. SCHOONMAKER: A combination, a cost  
4 performance vision and notice.

5 MR. KRAMER: Okay. But not stress in  
6 any one of the motors?

7 MR. SCHOONMAKER: No, that's correct.

8 MR. KRAMER: Actually, you answered my  
9 second question. So thank you.

10 MR. BRIGGS: Ms. Gefter, is now okay to  
11 ask Mr. Rowley about this Exhibit 40.

12 HEARING OFFICER GEFTER: Yes.

13 MR. BRIGGS: Or do we want to wait?

14 HEARING OFFICER GEFTER: You may  
15 question the witness on Exhibit 40.

16 VOIR DIRE

17 BY MR. BRIGGS:

18 Q Mr. Rowley, Exhibit 40, is this exhibit  
19 to scale?

20 A The cooling tower and the stack, with  
21 respect to both height and distance from each  
22 other, are to scale, yes.

23 Q But the other structures in the  
24 (indiscernible) are not in proportion to the  
25 cooling tower, is that right?

1           A     There's one other structure that's not  
2     in proper proportion because it's so far removed  
3     from the cooling tower. I didn't really think it  
4     was relevant to change it from what was in the AFC  
5     to create this exhibit. And that would be the  
6     inlet air to the combustion turbine. It should be  
7     drawn a little bit higher than it is.

8           Q     How about the proportion of relationship  
9     between the steam drum and the air cooled  
10    condenser, is it correct?

11          A     That distance, those heights, are  
12    approximately correct. I would point out that  
13    we've not done detailed design yet on this  
14    project. That that dimension of 852 feet I  
15    believe it is shown in the AFC figure being about  
16    eight feet lower than the top of the stack is  
17    likely going to be, once we get the detail design,  
18    to be the top of the structural steel on the HRG.

19                Which if you take a look at Exhibit 40  
20    you see the stack on the HRG, and then there's  
21    another little projection sticking out.

22          Q     Right.

23          A     The top of that steel there is more  
24    likely to reflect that 852 put elevation once we  
25    get through detailed design.

1           Q     The reason I ask this is because when I  
2     just put my ruler at the top of the HRG's steam  
3     drum, led over to the air cool condenser, I've got  
4     about a quarter inch of yellow about the line of  
5     my ruler. And I thought the air cooled condenser  
6     was at 100 feet and the steam drug was at 102.

7           A     As I stated, I have checked and I'm  
8     certain that the top of the stack elevation, with  
9     respect to the -- well, the stack height in  
10    position, with respect to all these cooling towers  
11    shown here, both height and position, difference  
12    from each other, in other words in height, are  
13    accurately scaled.

14          Q     So if the air cooled condenser -- if the  
15    amount of it that you can see about the visual  
16    line is correct, the steam drum is actually a  
17    little lower than it should be?

18          A     Again, I think I already answered that  
19    question. The elevation shown of 852 for the  
20    steam drum does not really reflect detailed  
21    design. And once we get detailed design, I think  
22    we'll find at the top of the steel being eight  
23    feet lower than top of stack is more reflective of  
24    the outcome.

25          Q     Okay.



1           A     So if you put your ruler straight across  
2     from the top of the stack to the top of the  
3     cooling tower, then you'll see proper scaling  
4     there.

5           Q     How much of the bulk of the steam drum  
6     structure will be above this line? And I realize  
7     that the tower may be a little bit above or below,  
8     depending on how it's ultimately designed. But  
9     I'm concerned about the visual bulk. How much of  
10    the main part of the structure is going to be  
11    above this line?

12          A     That's reflected in the visual  
13    simulations, and it's approximately shown here.  
14    I'm not sure that it's relevant to wet versus dry  
15    cooling though. We're kind of talking about  
16    details on the HRSG design.

17          Q     But my concern is someone might look at  
18    this and try to say, oh, the air cooled condenser  
19    is so much bigger in a visual sense than the rest  
20    of the plant. It dwarfs it by comparison. And if  
21    the scale is not right that it's not a fair  
22    representation. So I'm just trying to figure out  
23    exactly how I should understand this document,  
24    what I'm trying to figure out --

25          A     Yeah.

1 Q -- from a visual stand.

2 A I think the person looked at this and  
3 came to that conclusion they would be correct.  
4 And the judgment that they're making is based on  
5 an assumption that this drawing is properly scaled  
6 as I've described. And that would be the truth.

7 Q So you think the drawing is properly  
8 scaled despite --

9 HEARING OFFICER GEFTER: Okay.  
10 Mr. Briggs, I believe he's answered that  
11 question --

12 MR. BRIGGS: Okay.

13 HEARING OFFICER GEFTER: -- several  
14 times already. If you could move on please.

15 MR. BRIGGS: Sure.

16 HEARING OFFICER GEFTER: If you want,  
17 you have rebuttal testimony.

18 MR. BRIGGS: Yeah. Just brief,  
19 Mr. Powers was there something you wanted to  
20 clarify from your testimony earlier?

21 MR. POWERS: Right. I just wanted to  
22 respond to comments that were made -- to the  
23 comments that were made on Mr. Rowley's comments.  
24 I think Mr. Rowley indicated that if he hold all  
25 conditions constant, therefore, it's impossible to

1 get the same power out of an air cooled condenser,  
2 steam turbine generator. He is right. That is  
3 not the point I was making.

4 I was making the point that you want to  
5 hold your output constant. In order to do that  
6 with an air cooled condenser compared to a wet  
7 system, you need to increase your heat input. And  
8 we account for that in a thermal efficiency  
9 penalty of air cooling.

10 The point was made that the air cooled  
11 condenser height is related to output. I'd like  
12 to reiterate that Otay 277 megawatts steam turbine  
13 generator is designed for 75 feet. That's  
14 considerably smaller than the steam generator at  
15 Palomar.

16 I do stand by rebuttal testimony that  
17 Otay is a 42 sale ACC and it's designed for a 277  
18 megawatt steam turbine generator, not a 180  
19 megawatt steam turbine generator. I also stand by  
20 my testimony that it is 75 and three-quarters feet  
21 high at the top of the steam duct, not at the base  
22 of the steam duct.

23 And I invite the Applicant to confirm  
24 all that information. The issue about the length  
25 of the duct work, I think we have to defer to the

1 expertise of the ACC manufacturers on this. If  
2 they lay out this configuration as legitimate  
3 configuration, we need to rely on their expertise.

4 With that design, the estimated noise is  
5 less than 45 DB of 400 feet. The nearest  
6 residence of at least a 1,000 feet away, and so  
7 that is the effect of that ultra noise. I do  
8 concur that the ACC is less efficient overall,  
9 that it will result in a higher average back  
10 pressure on the steam turbine generator.

11 But if that cost of doing business is  
12 reflected in the additional fuel cost, which is  
13 already assessed, and the comment made by CEC  
14 staff that you cannot simultaneously ultimize all  
15 of these elements. Again, I simply refer to Otay  
16 Mesa. They were all optimized in that particular  
17 design. And that's the extent of my comments.  
18 Thank you.

19 PRESIDING MEMBER GEESMAN: Mr. Powers, I  
20 want to understand what you meant when you  
21 commented on the length of the duct work. Is that  
22 the 400 foot issue that Mr. Rowley raised?

23 MR. POWERS: Right. Commissioner, when  
24 you look at the second figure, figure 24-1,  
25 alternative one, what Mr. Rowley is referring to

1 is this black line, this black vertical line.

2 It's shown as larger, and then it necks down as  
3 you go to the second block.

4 And what's happening is there you have a  
5 large diameter duct that once you send half of the  
6 steam into that block you now use a smaller duct  
7 heading out to the second block. That's what this  
8 is showing. His point is that the duct work is  
9 too long. It won't work.

10 My point is, we need to defer to the  
11 designers of this equipment who presented this as  
12 a legitimate configuration for the site as opposed  
13 to opinionating as to whether they know what  
14 they're doing.

15 PRESIDING MEMBER GEESMAN: And in your  
16 review of other dry cooling installations, if you  
17 come across duct work of a similar length?

18 MR. POWERS: There's actually duct work  
19 of longer length out there. But typically the  
20 industry uses a kind of rule of thumb that if the  
21 duct work is more than 400 feet than that might  
22 create problems. In actuality, if the distance  
23 you need to go is more than 400 feet you would  
24 expand the size of the duct work.

25 That adds a little more cost, but it's

1 not an engineering issue. In this case I think  
2 the overall distance here is probably in the range  
3 of 400 feet, maybe slightly more than that, but in  
4 that ballpark.

5 PRESIDING MEMBER GEESMAN: Thank you.

6 HEARING OFFICER GEFTER: Do you have any  
7 more questions --

8 MR. BRIGGS: N.

9 HEARING OFFICER GEFTER: -- at this  
10 point?

11 MR. BRIGGS: No.

12 HEARING OFFICER GEFTER: Okay. Does  
13 anyone have any other redirect, recross? Okay.  
14 We're going to move on then. I just have one more  
15 question for Staff. And at one point  
16 Mr. Schoonmaker said that the wet surface air  
17 cooler alternative was basically disregarded by  
18 staff. Could you explain why? Because that is  
19 part of your analysis, WSAC.

20 MR. SCHOONMAKER: Yes, ma'am. I  
21 investigated the wet surface air cooler because it  
22 had been proposed as an alternative to pulling  
23 towers in other cases. In this case I could not  
24 find any significant advantage of it over a  
25 conventional cooling tower.

1           There were minor pros and cons, which if  
2       I were in the final design business I might to  
3       pursue. But since I'm in the study business I  
4       concluded that the differences were too small to  
5       be of relevance to yourself and the Commissioners.

6           HEARING OFFICER GEFTER: Thank you. All  
7       right. I think that we're finished with issue on  
8       the cooling options. We had alternatives  
9       indicated as our next topic. I wonder if the  
10      parties would stipulate that our discussion so far  
11      today has already incorporated alternatives.

12           Everybody seems to be nodding yes, so I  
13      have a stipulation that we don't need to go into  
14      the alternatives other than just take declarations  
15      on that topic. Everyone is in agreement?

16           MR. MILLER: That's fine with us.

17           HEARING OFFICER GEFTER: Okay. So then  
18      the next thing we need to do is identify the two  
19      -- is to receive the exhibits on this topic that  
20      we have just concluded. And what I'll do is start  
21      again with the Applicant, and you indicate which  
22      exhibits you're moving into the record.

23           MR. MILLER: I'm very sorry, I was  
24      interrupted. I didn't hear you.

25           HEARING OFFICER GEFTER: Okay. I'm

1 going to ask the parties to indicate which  
2 exhibits they're moving into the record regarding  
3 soil and water resources. I think we took the  
4 soil exhibits already. So let's go onto water.

5 MR. KRAMER: I don't know if you  
6 formally accepted --

7 HEARING OFFICER GEFTER: I think I  
8 accepted as soil.

9 MR. KRAMER: Okay.

10 HEARING OFFICER GEFTER: But I hadn't  
11 accepted as --

12 MR. KRAMER: They would be ours.

13 HEARING OFFICER GEFTER: And I have  
14 accepted yours.

15 MR. KRAMER: I think you left it open.

16 HEARING OFFICER GEFTER: I did. Okay.  
17 Well, let's just go through it. And I'll ask you  
18 to do the housekeeping for us because it got  
19 complicated as to which exhibits we finally agreed  
20 upon. We'll go through it real quickly for the  
21 record. Mr. Miller.

22 MR. MILLER: In introducing Mr. Rowley's  
23 testimony I did list the -- he recited the  
24 exhibits that he was sponsoring, but would you  
25 like me to repeat that? I believe they're in the



1 record.

2 HEARING OFFICER GEFTER: Yes. Repeat it  
3 just so that I have it one place in the  
4 transcript.

5 MR. MILLER: So I will read them and he  
6 will have sponsored them. AFC section II --  
7 excuse me, Exhibit One, AFC section II, project  
8 description section III, alternatives section 5.4  
9 concerning water supply and appendix G. In  
10 addition Exhibit 2A dated responses 46 through 48.  
11 Exhibit 3A date of response is 134, 135.

12 Exhibit 16, response to petition from  
13 Bill Powers for Committee Workshop regarding  
14 alternative cooling options. Exhibit 20,  
15 information concerning advantages and  
16 disadvantages of wet and dry cooling systems.

17 Exhibit 23, response to Bill Powers,  
18 December 2, 2002 comments regarding plant cooling  
19 systems. Exhibit 26, a letter from San Diego  
20 County Water Authority supporting Palomar Energy  
21 use of reclaimed water. And then I guess in  
22 addition to that Exhibit 40 plant elevation. And  
23 I believe that concludes --

24 HEARING OFFICER GEFTER: And also  
25 Exhibit 35, which is Mr. Rowley's direct

1 testimony.

2 MR. MILLER: And Exhibit 35,  
3 Mr. Rowley's testimony.

4 HEARING OFFICER GEFTER: And also his  
5 rebuttal testimony.

6 MR. MILLER: Correct.

7 HEARING OFFICER GEFTER: Is that  
8 included in 35 as well?

9 MR. MILLER: Yes, we have it identified  
10 as a (indiscernible). Excuse me, we have Exhibit  
11 38 as a rebuttal testimony filed on April 4th.

12 HEARING OFFICER GEFTER: And Mr. Hogan's  
13 testimony is a portion of Exhibit 35 as well,  
14 correct?

15 MR. MILLER: And I am reminded that I  
16 went straight to Mr. Rowley's testimony because a  
17 long time ago that we passed Ms. Breese's  
18 testimony, which was (indiscernible).

19 HEARING OFFICER GEFTER: And that  
20 portion of Exhibit 35.

21 MR. MILLER: Yes.

22 HEARING OFFICER GEFTER: All right. All  
23 the Exhibits that were just reiterated by  
24 Mr. Miller are now received into the record,  
25 unless I hear an objection. No objections. Okay.

1           And then now, Staff, will you identify  
2           your exhibits.

3           MR. MILLER: Did you accept the ones for  
4           Ms. Breese as well?

5           HEARING OFFICER GEFTER: Yes, I did.

6           MR. MILLER: Okay.

7           HEARING OFFICER GEFTER: All of the ones  
8           that you just listed for us.

9           MR. MILLER: That didn't include hers  
10          actually.

11          HEARING OFFICER GEFTER: Exhibit 35 and  
12          the other items that she sponsored?

13          MR. MILLER: Yes. I didn't reread them.

14          HEARING OFFICER GEFTER: All right.

15          MR. MILLER: That was AFC section 5.4,  
16          appendix G-1, appendix G-2, Exhibit 2-A. Date of  
17          response is 52 through 59. Exhibit 2-D date of  
18          response is 49 to 55. Exhibit 29, notice of  
19          intent.

20          HEARING OFFICER GEFTER: Those exhibits  
21          are also received into the record. Okay.

22          Now Staff.

23          MR. KRAMER: Exhibit 50.

24          HEARING OFFICER GEFTER: Okay. The  
25          portion dealing with water, soil and water

1 resources.

2 MR. KRAMER: And then also Exhibit 51,  
3 that portion.

4 HEARING OFFICER GEFTER: Which refers to  
5 soil and water resources.

6 MR. KRAMER: Yes.

7 HEARING OFFICER GEFTER: You have  
8 amended conditions in that section.

9 MR. KRAMER: Correct.

10 HEARING OFFICER GEFTER: Okay. Exhibit  
11 51 related to soil and water resources, and  
12 Exhibit 50, related to soil and water resources,  
13 are accepted into the record. Now we're going to  
14 go through the exhibits that the Intervenor has  
15 sponsored. Mr. Briggs.

16 MR. BRIGGS: Ms. Gefter, do you want me  
17 to read each one?

18 HEARING OFFICER GEFTER: We're going to  
19 just go through the ones that we have identified  
20 for acceptance into the record. Go through them  
21 for us.

22 MR. BRIGGS: Exhibit 70, Exhibit 71,  
23 Exhibit 72, Exhibit 74, Exhibit 76, Exhibit 77,  
24 Exhibit 80, Exhibit 81, Exhibit 82, Exhibit 83,  
25 Exhibit 84, Exhibit 85, Exhibit 86, Exhibit 87,

1 Exhibit 88, Exhibit 89.

2 HEARING OFFICER GEFTER: You can  
3 actually say Exhibits 90 through.

4 MR. BRIGGS: Exhibits 89 through 97.

5 HEARING OFFICER GEFTER: Right.

6 MR. BRIGGS: Exhibits 98 through 105.

7 HEARING OFFICER GEFTER: Ninety-nine has  
8 been removed.

9 MR. BRIGGS: Sorry. Yes, that's  
10 correct. My apologies.

11 HEARING OFFICER GEFTER: Ninety through  
12 97, 98, 100.

13 MR. BRIGGS: One hundred, 101 through  
14 112.

15 HEARING OFFICER GEFTER: 103 was removed  
16 I thought. Yeah. 103 is removed.

17 MR. BRIGGS: That's right.

18 HEARING OFFICER GEFTER: All right.  
19 Okay. Pending objection from any of the parties,  
20 Mr. Miller?

21 MR. MILLER: Yes. I believe we kind of  
22 reserved to now Exhibit 77, which was the order  
23 board memorandum. And it had to do with  
24 consistency with using HARF Facility  
25 (indiscernible) with the loan agreements. And I

1       objected on that. That was irrelevant.

2               I think Mr. Blaising did as well. And I  
3       don't think it figured in the direct testimony  
4       actually.

5               MR. BRIGGS: We don't object to that.

6               HEARING OFFICER GEFTER: All right. So  
7       77 is removed. That will not be received.

8               MR. BLAISING: Your Honor, I previously  
9       objected to Exhibit 76. I withdraw that  
10      objection.

11              HEARING OFFICER GEFTER: Okay.

12              MR. BLAISING: I previously objected to  
13      Exhibit 83 and I continue to object to that based  
14      on the recycled water services agreement being now  
15      in an exhibit.

16              HEARING OFFICER GEFTER: I'm going to  
17      grant your request to remove this from the record.  
18      I think that the agreement between the parties and  
19      the City of Escondido, and the Water District and  
20      Palomar speaks for itself. And I don't think that  
21      it's particularly relevant to have Exhibit 83 in  
22      the record.

23              MR. BRIGGS: That's fine.

24              HEARING OFFICER GEFTER: So that's  
25      removed as well.

1 MR. BLAISING: Thank you.

2 HEARING OFFICER GEFTER: Okay. Other  
3 than that, the other exhibits listed by Mr. Briggs  
4 are received into the record at this time.

5 MR. BRIGGS: Thank you.

6 HEARING OFFICER GEFTER: Then with  
7 alternatives, if you wanted to do that very  
8 quickly, we receive that by declaration and then  
9 we'll go to air quality.

10 MR. MILLER: For alternatives we had the  
11 pretrial testimony of Joseph Rowley, which  
12 includes sponsoring Exhibit One, section III,  
13 alternatives. Exhibit 3A, date of response 1/18  
14 to 1/19. And I would request that those be  
15 accepted into the record, as well as his Exhibit  
16 35 that constitutes his testimony on alternatives.

17 HEARING OFFICER GEFTER: Okay. No  
18 objection?

19 MR. BRIGGS: No objection.

20 HEARING OFFICER GEFTER: No objection,  
21 those exhibits are received into the record.  
22 Staff, Mr. Kramer?

23 MR. KRAMER: No.

24 HEARING OFFICER GEFTER: Do you have  
25 exhibits?

1 MR. KRAMER: Exhibit 50.

2 HEARING OFFICER GEFTER: Hearing no  
3 objection Exhibit 50 is received into the record  
4 too, with respect to Alternatives. And the same  
5 with the Applicant's Exhibits with respect to  
6 Alternatives, the items that we listed for  
7 Alternatives. All right.

8 And we're going to go to air quality  
9 now. Let's go off the record.

10 (Off the record.)

11 HEARING OFFICER GEFTER: Okay.  
12 Mr. Lorey, please introduce yourself.

13 MR. LOREY: I'm Frank Lorey, City of  
14 Escondido Planning Commissioner. I wanted to just  
15 make some general comments. On November 19th,  
16 2002 we conducted public hearings and invited  
17 public comment. And we were looking at the  
18 Escondido Research and Technology Center and the  
19 EIR.

20 So we were addressing a lot of same  
21 issues that you're looking at tonight. We covered  
22 these issues pretty thoroughly. We had hundreds  
23 of members of the public there. And we really  
24 received practically no public opposition to this  
25 plan.



1           So coming here this afternoon and  
2       hearing what's going on is really rather  
3       surprising to me that these details would be  
4       nitpicked to death. It's amazing. This project  
5       has been held up long enough. We support it. The  
6       Escondido Planning Commission and City Council  
7       have backed the efforts of the California Energy  
8       Commission.

9           We've gone along with what you have done  
10      and followed it closely. I've been at all  
11      meetings except one. And we have backed every  
12      effort to certify this power plant, and want to  
13      see it built. I just thank you for the  
14      opportunity just to make general comments.

15          I know Mr. Brindle wants to make  
16      comments tomorrow in the land use portion. But I  
17      just wanted to go on record saying that we are  
18      really behind it, and behind the efforts to  
19      certify this and get it rolling.

20          HEARING OFFICER GEFTER: Thank you,  
21      Mr. Lorey, for being here this evening. Also,  
22      let's see, I know Mr. Perkins was here earlier and  
23      wanted to make a comment on the water quality  
24      issue. Mr. Perkins, would you please come forward  
25      and introduce yourself, tell us where you're from.

1           MR. PERKINS: Thank you. Dan Perkins,  
2 CR Club, San Diego Chapter Energy Chair. And  
3 although we're not objecting to the power plant  
4 per se, we do have concerns about the water that's  
5 going to be used here. We live in a very dry  
6 area. We're actually in a desert here in San  
7 Diego.

8           And we feel that, although this plant is  
9 designed for a 30 year life, most of these plants  
10 live beyond that period. And we're making a  
11 commitment at this point, if you do water cooling,  
12 for a period that could be 30 to 50 years. That's  
13 a lot of water under the dam.

14           We think that we may have a use for that  
15 water in the very near future, particularly with  
16 new technologies that are coming around. So we  
17 are really in support of the dry cooling process  
18 to preserve our water for some future use.

19           Just because it's not here now doesn't  
20 mean that we're not going to be needing that water  
21 in the very near future. And we are all giving  
22 consideration now to desalination. And as the  
23 technology develops we'll be able to clean the  
24 water up. Thank you.

25           HEARING OFFICER GEFTER: Thank you very

1 much. Mr. Gary Anderson. Thank you. Please  
2 introduce yourself and tell us where you're from.

3 MR. ANDERSON: Okay. Good evening,  
4 everyone. My name is Gary Anderson. I'm a  
5 control operator, local resident. And I'm very  
6 much in support of Palomar Energy Project. I've  
7 worked in power plants for about 20 years in  
8 nuclear power at San Onofre and at a couple of  
9 other generating stations.

10 I work at Huntington Beach Generation  
11 Station right now. And I'm very excited to see  
12 this project go forward. It's technology that we  
13 need. We clearly need the power and I believe  
14 that with the, you know, technology of the older  
15 power plants, which is the ones I operate are from  
16 '58 and '59, we definitely need something that's a  
17 little newer and will provide us power into the  
18 future. And that's basically all I have to say.

19 HEARING OFFICER GEFTER: Thank you very  
20 much for being here this evening. Mr. Rodriguez,  
21 please introduce yourself and tell us where you're  
22 from.

23 MR. RODRIGUEZ: Yeah. Mark Rodriguez.  
24 I'm an Escondido resident on the western border of  
25 the proposed site. The simple fact that when this

1 power energy project become operational the air  
2 quality in Escondido will even be worse than it is  
3 today. The clarification of no net increase is to  
4 ensure that the project doesn't further degrade  
5 air quality in the same area where a potential  
6 project is to be located.

7 The no net increase approach that has  
8 been identified for this facility to operate is  
9 strictly at a regional level. The project is  
10 being located in Escondido, yet the emission  
11 reduction credits that are currently slated for  
12 this project are no way intended to provide local  
13 benefits.

14 One way of ensuring local provisions is  
15 suppose to be provided for the use of best  
16 available control technology and proper design of  
17 the facility, including cooling towers. The only  
18 local benefit that this facility will provide is  
19 the funds that the city will use at its own  
20 discretion for the use of the reclaimed water from  
21 the HARF Facility.

22 The track record for the HARF Facility  
23 (indiscernible) violations in the morning  
24 concentrations will result in a direct increase in  
25 annual ambient air quality for PM10 emissions that

1 is currently exceeding the new state standard by  
2 50 percent.

3 This, along with the lack of a true  
4 cumulative impact, to include both mobile and  
5 stationary sources, which has not been represented  
6 into evidence, will result in degrading  
7 Escondido's air quality even further. The  
8 argument that the expected tailpipe emissions is  
9 not -- the expected tailpipe emission reduction is  
10 not the case with the new Federal Appeals Court  
11 dockage of the California Clean Air Rule.

12 Once again, CEQA requires a cumulative  
13 impact that include the effect of current and  
14 probable future projects and does not  
15 differentiate between mobile and stationary  
16 sources.

17 CEQA Resources Code Section 21083,  
18 California Code of Regulations Title 14, Section  
19 15065, and the California Code of Regulations  
20 Title 14 Section 15130 must take into account  
21 affects of past, current and probably projects  
22 that are cumulative, considerable, and causing  
23 related impacts, not necessarily identical to the  
24 proposed project and cause related impacts.

25 The CEC has required accumulative

1 analysis from previous applicants to include  
2 sources other than (indiscernible) power plants.  
3 Mr. Rowley stated earlier that public input was  
4 for the plant to be designed with as small of a  
5 visual impact as possible.

6 The problem with that is -- well, he  
7 also stated -- we also questions back in the  
8 beginning two years ago of the effects of the  
9 ammonia. And he basically gave us indication that  
10 wouldn't be any problems caused by that.  
11 Unfortunately, again, ammonia dispersion will  
12 again create additional secondary sources for PM10  
13 or PM2.5.

14 And it will even impact the air quality  
15 further. The mayor was here shortly. That's the  
16 first time I've ever seen her at one of these  
17 meetings. And so for the past years that I've  
18 been attending these meetings for both peaker  
19 plants and this Semptra Facility, not one of our  
20 elected officials has attended any meetings  
21 dealing with the two peaker plants or Semptra.

22 And which makes it kind of hard to make  
23 an educated decision. In one case one of our  
24 council members didn't even know the location of  
25 the CalPeak Plant with respect to the ERTC before

1 voting to allow it to proceed before establishing  
2 standards for stationary sources.

3 That plant now dominates the main  
4 entrance to the ERTC site, because the CEC did not  
5 consider the effects of the CalPeak Plant. And  
6 this was with Sempra's input also. And I believe  
7 that the development of the proposed ERTC  
8 Corporate Headquarters site in the distant future,  
9 if at all, who's to say that it will ever be built  
10 at its protected use.

11 Local control of PM10 mitigation or a  
12 mitigation fund, specifically for Escondido, must  
13 be part of the conditions of certification with  
14 residence having control in the matter. This  
15 Escondido City Council has taken no interest in  
16 this and has left the decisions of the community  
17 agencies outside of the area.

18 The ERC's are strictly a paper  
19 transaction for economic development while they  
20 assume eventual attainment. The fact the  
21 secondary PM10 caused by ammonia emissions  
22 conflicts and contributes to any applicable air  
23 quality plant. PM10 violations of five micrograms  
24 per cubic meter are already being reached while  
25 the new standard for ammonia emissions of 12.2

1 micrograms annually now requires CEQA offsets.

2 Standards for ozone attainment are  
3 hampered and even further physically -- hampered  
4 even further physically causing additional  
5 violations. Semptra's profits are now up 38  
6 percent while the region paid the highest rates in  
7 the nation during the energy crisis, and are  
8 projected to be the highest statewide even without  
9 pending increasing.

10 Steven Baun, Semptra's chairman and  
11 present CEO, had a strategic overview at an  
12 analysis conference to make a statement to  
13 successfully navigate the California energy crisis  
14 and the Enron exposure, and that's not going to  
15 happen. The spotlight has now fallen on Semptra  
16 with the El Paso Corporation settlement for market  
17 manipulation, along with the Sierra Pacific  
18 lawsuit in Nevada.

19 Anticompetitive and fraudulent behavior  
20 not only harms competitive competition for  
21 delivering natural gas, but also produce  
22 exorbitant and illegal profits to Sierra Pacific  
23 in its lawsuit. Profits for shareholders, rather  
24 than lower prices for rate payers.

25 And transmission lines that would become



1 gold mines need to be turned into benefits and air  
2 quality improvements for this community in which  
3 this facility is being built. Thank you.

4 PRESIDING MEMBER GEESMAN: Let me make  
5 the observation that mayor and one of the council  
6 members were in attendance at the pre-hearing  
7 conference that we held here in I think it was  
8 earlier in March.

9 HEARING OFFICER GEFTER: Thank you,  
10 Mr. Rodriguez. Also, Mr. Shawn Delargy. And if  
11 I'm pronouncing your name correctly, please  
12 identify yourself and tell us where you're from.

13 MR. DELARGY: My name is Shawn Delargy.  
14 I'm a local resident. I live in Escondido, the  
15 Emerald Heights Community. I can see the plant  
16 proposed site from my backyard. I've spoke at  
17 previous meetings like this. I'm just here to say  
18 that I'm in support of the project. I have over  
19 13 years experience in operating and training  
20 people to operate power plants.

21 And without elaborating too much, I'm  
22 confident in this process to ensure that we get a  
23 good power plant and I'm in support of it. I've  
24 read most of the documents that have come forth.  
25 It looks like a great plant. And that's about it.

1 Thank you.

2 HEARING OFFICER GEFTER: Thank you. Is  
3 there anyone else that would like to address us?  
4 Yes, please come forward and tell us your name,  
5 and spell it for us, and tell us where you're  
6 from.

7 MR. LORUSSO: My name is Steve LoRusso,  
8 L-O capital R-U-S-S-O.

9 HEARING OFFICER GEFTER: And your first  
10 name.

11 MR. LORUSSO: Steve.

12 HEARING OFFICER GEFTER: Steve.

13 MR. LORUSSO: I am a resident, former  
14 president of the concerned neighbors of Quail  
15 Hills. For two years our Quail Hills area has  
16 been embroiled in controversy. Two years ago when  
17 the controversy involved 12 years of rock  
18 crushing, number one carcigin and as close as 500  
19 feet from our homes, I worked tirelessly with my  
20 neighbors to defend our community.

21 The evidence then is an imminent threat  
22 to our health. According to the evidence I've  
23 seen thus far I no longer feel threatened. Semptra  
24 has conducted numerous neighborhood meetings since  
25 the project's inception and have literally allowed

1       us to participate in its design.

2               What I felt particularly impressive was  
3       the low profile design of the power plant itself,  
4       and of course most important to me is the fact  
5       that Semptra and their partner Developer JRMC have  
6       elected not to mine a 30 million dollars worth of  
7       granite from the ground, and to complete the  
8       entire grading process in less than a year.

9               If I now understand the outstanding  
10       issue, the focus of Mr. Powers' intervention, is  
11       whether the plant should be water cooled or air  
12       cooled. I've heard the arguments, but they're not  
13       convincing. First Mr. Rodriguez presented me with  
14       a regional of threat. My investigation revealed  
15       there has no precedent for airborne contamination,  
16       particular in an arid environment.

17              Then apparently Mr. Powers alarmed by  
18       neighbor Greg Morill with another threat of  
19       ammonia particulate matter from the cooling tower.  
20       However, I've lived a nine mile away from one of  
21       the largest egg farms in San Diego. And I've  
22       lived there for over 18 years.

23              The chicken manure that comes from that  
24       egg farm is somewhere about 100 times what will be  
25       coming out of that cooling tower as I understand

1 it. And it has never compromised my health.

2 Although I must admit it's been a social deterrent  
3 from time to time.

4 Now, when I recently spent an hour on  
5 the phone with Mr. Powers the focus of his concern  
6 was not on public health, but on water  
7 conservation. And I applaud Mr. Powers'  
8 commitment to the environment. However, according  
9 to Escondido City Councilman Di Agusta, who also  
10 met with Mr. Powers, hypothetically he would  
11 prefer us to use the reclaimed water for avocado  
12 groves.

13 Unfortunately, unless Mr. Powers is  
14 willing to contribute millions to the  
15 infrastructure in this particular economy to  
16 extend the reclaimed water pipelines, that unused  
17 reclaimed water would otherwise be dumped in the  
18 ocean.

19 While air cooling might have some  
20 marginal benefits to the environment, the foot  
21 print and the infrastructure necessary to provide  
22 it would fly in the face of Semptra's commitment to  
23 us to have a low profile design approach to the  
24 power plant.

25 I also feel this low profile design is

1 the key factor in the quality of the business that  
2 choose to operate in the Palomar Park. From the  
3 reference point of this neighbor and resident of  
4 Escondido, I'm convinced that Semptra's original  
5 design would be better serve the interest of our  
6 neighborhood and the community. Thank you.

7 HEARING OFFICER GEFTER: Thank you. Is  
8 there anyone else who would like to address us  
9 right now, make a public comment? Please tell us  
10 your name and spell it for us, and tell us where  
11 you're from.

12 MR. MORILL: G.D. Morill, M-O-R-I-L-L.  
13 I live on the street that borders the whole  
14 project. I'm going to have the industrial park  
15 next to me, between me and the power plant. And  
16 so this project really affects me I think a lot  
17 more than even some of the other residence who are  
18 a little more insulated from it.

19 Did you need anything else from me?

20 HEARING OFFICER GEFTER: Your first name  
21 is Greg?

22 MR. MORILL: Greg.

23 HEARING OFFICER GEFTER: Thank you.

24 MR. MORILL: I wanted to hear this  
25 debate. I don't know that I've really heard it.

1 You guys did a lot of procedural stuff there for  
2 about four hours. And I got to hear just what I  
3 consider to be a little bit of the debate. I've  
4 talked to Mr. Powers, talked to Joe Rowley.

5 And the problem is that I hear two  
6 different things, and it's really hard as a  
7 resident and as a layman to decipher all this  
8 information really. Who's right? Are they both  
9 right? Is someone right and someone wrong?  
10 Because the information is contradictory.

11 You've got them talking about water  
12 issues on the one hand. You've got Mr. Powers  
13 talking about them on the other. We have  
14 environmental issues. We've got the ammonia  
15 question. We've got noise. We've got visual  
16 impact.

17 From a residence perspective one of the  
18 things I was going to talk about was land value or  
19 home value, and what this project being right next  
20 to it does to a home owner. And I went through a  
21 process of trying to sell my home. My family  
22 said, you know, we're not going to live there.  
23 Are we going to get cancer or what's the deal, you  
24 know?

25 So we tried to sell our house, and every

1 time that if we were being honest, which we are,  
2 we said we have to disclose that they're building  
3 a power plant next to us. And that ran everyone  
4 off. The place that we tried to get didn't work  
5 out.

6 So we're kind of stuck there for a home  
7 that we owe somewhere around \$300,000 for, tried  
8 to get that home on a half acre with that view and  
9 a pool for anything less than five, or six or even  
10 \$700,00 someplace else. And we really can't do  
11 it. So we're kind of stuck there.

12 So I guess from a residence point of  
13 view what I want is for you guys to make sure that  
14 whatever happens here, whether it's dry or it wet,  
15 that it be in my best interest, and in the best  
16 interest of the residence of the city. And I'm  
17 having a hard time on getting a read on like what  
18 your guys' opinions are.

19 And I don't know that this is the time  
20 or the place for that, but I heard just a little  
21 snippet of all this information. I was surprised  
22 really at the narrowness of the debate earlier in  
23 the day. Does that make any sense to you? It  
24 seemed really narrow to me.

25 PRESIDING MEMBER GEESMAN: Let me say

1 something about the process both in direct  
2 response to you and for the benefit of the public  
3 intended. Much of this debate is conducted on  
4 paper. And after we close the hearings tomorrow  
5 the parties will each submit briefs.

6 That will provide I think more context  
7 than you're able to pick up in a hearing such as  
8 we have today where really the parties are focused  
9 on subsets of the information provided. After the  
10 parties submit their briefs, Hearing Officer  
11 Gefter will prepare a proposed decision on the  
12 part of the Committee.

13 The Committee will review that and  
14 release it when we are comfortable with its  
15 content. And that will represent the best opinion  
16 of Commissioner Keese, the second member, and  
17 myself. The parties will have an opportunity, the  
18 public will have an opportunity to comment on that  
19 proposed decision.

20 And then it will be taken up by the full  
21 Commission. I don't know if we will have any more  
22 proceedings here or not. And to the extent that  
23 you do have an interest in the proposed decision,  
24 I'd suggest that you submit written comments on  
25 it, because we take written submittals very



1 seriously.

2 But I think after tomorrow's hearing  
3 everything you see associated with this case will  
4 provide more context and more focus. And you'll  
5 get a fuller flavor of the debate, as it were, on  
6 these issues.

7 MR. MORILL: Based on what you guys are  
8 going to --

9 PRESIDING MEMBER GEESMAN: That's  
10 correct.

11 MR. MORILL: -- give us back as a  
12 community?

13 PRESIDING MEMBER GEESMAN: That's  
14 correct.

15 MR. MORILL: Will someone answer the  
16 questions though? I mean one of the issues here  
17 is we've got all these hanging issues it seems to  
18 me. Who's right and who's wrong? Who's figures  
19 are good and who's figures are bad? Who's logic  
20 is good? I mean I heard Mr. Rowley indicate that  
21 Mr. Powers was defying the laws of nature.

22 Is anybody going to address that? Are  
23 you just going to leave it hanging?

24 PRESIDING MEMBER GEESMAN: We'll address  
25 each of the issues called out by the law as

1 necessary elements of our decision. And I think  
2 you'll be able to discern from our decision our  
3 view as to who's right and who's wrong. I'm not  
4 certain that we'll have an opinion about repealing  
5 the laws of nature.

6 But I think that you'll be able to  
7 discern a pretty clear viewpoint on all of the  
8 other issues.

9 MR. MORILL: Well, just in conclusion  
10 then, I just want to say that, you know, gee,  
11 that's a lot of faith to put in you guys. I hope  
12 you're clear thinking. I hope they're not  
13 political agendas. I hope that the decisions that  
14 are rendered are not based on back room deals and  
15 untruths.

16 I would hope that this process -- and I  
17 don't know if I've gotten that flavor yet. Like  
18 you say, maybe when you guys put out your brief  
19 I'm going to feel differently about it. But I  
20 don't know that the truth has come out here in the  
21 four hours that I've sat here and listened.

22 And I don't know, reading the arguments  
23 from Mr. Powers, that I'm ever going to get  
24 satisfied. I hope I am. And the bottom line for  
25 me is that I've got two kids, a wife. I've got a

1 home that I've invested my life in. And I sure  
2 hope you guys do a bang up job in keeping our  
3 community safe and coming up with the best project  
4 that is going to serve the citizens of Escondido.  
5 Thank you.

6 PRESIDING MEMBER GEESMAN: We'll do  
7 that.

8 HEARING OFFICER GEFTER: Okay. Thank  
9 you for your comments. Is there anyone else who  
10 would like to come forward.

11 MS. MENDONCA: Hi. Roberta Mendonca,  
12 the public advisor. I'd like to (indiscernible)  
13 on the Commissioner's comments about comments  
14 throughout the process and invite any members of  
15 the audience, public members of the audience, who  
16 would like to participate by submitting written  
17 comments.

18 I stand ready to assist you in that  
19 process, and we will see that they get documented  
20 and properly distributed. It's real easy to get  
21 me by e-mail. I'm at pao.energy.ca.us or mandonc,  
22 same address. Thank you very much. I'm the  
23 public advisor. I'm here to help with the public.

24 HEARING OFFICER GEFTER: Thank you. All  
25 right. At this point we're going to go back to

1 the evidentiary hearing. The public advisor,  
2 Ms. Mendonca, will let us know if there's any  
3 other members of the public who arrive later and  
4 will give them an opportunity to address us at  
5 that time.

6 Right now we're going to take testimony  
7 on air quality. If the Applicant is ready to  
8 proceed, Mr. Miller, we will go forward.

9 MR. MILLER: I have four witnesses in  
10 the area of recall. And we have two witnesses in  
11 public health. And when we get further into this  
12 we may discover some elements, the debate on  
13 ammonia in which we're coming to. We'll derive  
14 from our side from part of our testimony in public  
15 health.

16 So it might make sense to present that,  
17 as well as air on direct. But I'll leave it to  
18 you, if you want us to shift gears and do that we  
19 can certainly do that.

20 HEARING OFFICER GEFTER: Okay. We'll  
21 see what happens. Okay. If you have four  
22 witnesses why don't you have them all sworn at the  
23 same time.

24 MR. MILLER: Sounds good.

25 HEARING OFFICER GEFTER: And then

1       introduce them to us.

2               MR. MILLER:   Okay.   And, Ms. Gefter, I'm  
3       just wondering as we did with water, if this  
4       wouldn't proceed more quickly, if we could do the  
5       direct testimony of the Applicant and the Staff,  
6       and then do cross on all of that.

7               HEARING OFFICER GEFTER:   Okay.   If  
8       there's no objection from the parties, if everyone  
9       would stipulate to that.

10              MR. BRIGGS:   No objection.

11              HEARING OFFICER GEFTER:   Thank you.  
12       Okay.   We'll do that.   Please introduce your  
13       witnesses before you proceed.

14              MR. MILLER:   Okay.   And we shall also  
15       indicate the Air District with the (indiscernible)  
16       witness as well, Mr. Lake.

17              HEARING OFFICER GEFTER:   When you get  
18       ready to call upon them we'll ask them to come  
19       forward.

20              MR. MILLER:   Our witnesses are Sara  
21       Head, Steve Heisler, Alberto Abreu, and Mr. Howard  
22       Balentine.   So what I'm planning to do is present  
23       Ms. Head's testimony, is a copulation of the whole  
24       subject of air quality.   And the other  
25       individuals, I believe that I could introduce

1       their endorsement of a part of testimony just by  
2       declaration. And then they're here for questions.

3               So as far as live testimony, I'm  
4       planning Ms. Head and Mr. Heisler.

5               HEARING OFFICER GEFTER: Okay. That  
6       will be fine. I'll just ask the witnesses to  
7       please speak into the microphone. The people in  
8       the audience are having trouble hearing us. Thank  
9       you.

10              MR. MILLER: What I find if I barely  
11       turn my head that's when I lose it. Okay. So  
12       we'll start off with Ms. Head then.  
13       Thereupon,

14                       SARA HEAD, STEVE HEISLER

15                       HOWARD VALENTINE

16       were called as a witness herein and, after having  
17       first been duly sworn, was examined and testified  
18       as follows:

19                       DIRECT EXAMINATION

20       BY MR. MILLER:

21               Q       Could you please state your name and  
22       occupation for the record.

23               A       My name is Sara Head, and I'm a  
24       department manager at ENSR, and I'm an  
25       environmental consultant specializing in air

1 quality impact assessment.

2 Q And ENSR is E-N-S-R. Could you please  
3 describe your educational background and your  
4 occupational experience related to your testimony  
5 in this proceeding?

6 A My education is that I have a bachelor's  
7 of science in atmospheric sciences from UC Davis.  
8 I have over 28 years of experience in  
9 environmental consulting. I'm also the vice chair  
10 of the Ventura County Air Pollution Control  
11 District Advisory Committee.

12 And I'm also on the board of directors  
13 of the Air and Waste Management Association. I've  
14 worked on several CCE citing cases, including  
15 Mountain View, High Desert Power Project, a little  
16 bit on Otay Mesa, as well as Power Generation  
17 Facility permitting in Nevada and Arizona.

18 Q And what would your job description be  
19 with regard to the Palomar Energy Project?

20 A I'm ENSR's project manager, meaning I  
21 have oversight for the preparation of the  
22 environment impact analysis, and in particular I  
23 manage the air quality and public health analysis  
24 included in the AFC. And also work with the Air  
25 Pollution Control District on the determination of

1 compliance application.

2 Q And please explain the purpose of your  
3 testimony.

4 A My testimony provides an overview of the  
5 Air Quality Impact Analysis.

6 Q All right. We have some exhibits that  
7 she would be sponsoring. And my thought would be  
8 to get those listed, and then we'll go to her  
9 summary of her testimony. What portions of the  
10 application for certification would you be  
11 sponsoring?

12 A Together with Steve Heisler and Howard  
13 Balentine, I'm sponsoring Exhibit One, AFC  
14 sections 5.2, air quality, and appendix E.

15 Q Are you sponsoring any portions of other  
16 exhibits?

17 A Together with Alberto Abreu, Steve  
18 Heisler and Howard Balentine I'm sponsoring  
19 Exhibit Two, data response one through 19, Exhibit  
20 17, Palomar Energy PM10 mitigation plan, Exhibit  
21 16, 20 and 23 related to dry cooling alternatives,  
22 Exhibit 18, Palomar Energy emission reduction  
23 calculations.

24 Exhibit 30, a letter from the San Diego  
25 APCD to Susan Gefter, and Exhibit 34, a letter



1 from Sempra Energy Resources to the San Diego  
2 AFCD.

3 Q Thank you. Would you please summarize  
4 your testimony.

5 A Yeah. Air quality is an uncontested  
6 topic other than some aspects raised by Mr. Powers  
7 with respect to dry cooling. My testimony will  
8 just touch on some of the main points and in  
9 particular some areas in which there's been  
10 questions.

11 San Diego Air Pollution Control District  
12 has been delegated the responsibility to implement  
13 the new source review, and PSD air permitting  
14 programs for stationary sources within San Diego  
15 County. Palomar submitted an application to the  
16 District, the review, the proposed sources,  
17 emissions, best available control technology, air  
18 quality impact analysis, health risk assessments,  
19 offset proposals, and compliance with all  
20 applicable requirements.

21 One of the requirements was to submit an  
22 applicant certification that showed that all  
23 sources operated by the project owner in  
24 California are in compliance. A certification  
25 covering Sempra Energy Resources Operations was

1 submitted.

2           However, based on comments from the  
3 California Energy Commission Staff on the PDOC, on  
4 the preliminary determinate compliance, and at the  
5 request of the District, the compliance  
6 certification covering all sources operated by  
7 Sempra Energy, the parent company, was  
8 subsequently submitted to the District.

9           The San Diego Air Pollution Control  
10 District performed a very thorough review of the  
11 project and issued the final determination of  
12 compliance for Palomar Energy in December of 2002.  
13 They issued the same permit as the PSD permit with  
14 EPA's in February 2003.

15           San Diego Air Pollution Control  
16 District is the primary agency tasked with  
17 attaining and maintaining the EMET air quality  
18 standards within its borders. San Diego is  
19 classified as nonattainment for ozone for both the  
20 federal and state standards.

21           Although the San Diego air basin was  
22 found by the EPA late last year to have attained  
23 the one hour federal ozone standard. San Diego is  
24 classified as attainment of the federal PM10  
25 standards, but is nonattainment for the state's

1 standards.

2 The Air Resources Board approved revised  
3 state standards for particulate matter that are  
4 expected to take effect soon. On final approval,  
5 the Office Administrative Law and be implemented  
6 over roughly the next year. PM10 levels in the  
7 Escondido area have remained relatively constant  
8 with only a couple of the exceedences of the 24  
9 hour standard actually observed in each of the  
10 last six years.

11 The new low annual PM10 standard will  
12 not change the attainment status of the county.  
13 The county is in attainment of all other  
14 standards. With respect to emissions and control  
15 technology, Palomar Energy will install state of  
16 the art air pollution control equipment that meet  
17 the best available control technology  
18 requirements.

19 A required NOx submission level of 2PPM,  
20 one hour average NOx, is lower than most  
21 California projects. An oxidation catalyst will  
22 control COVOC and hazardous air pollutant  
23 conditions as well. The cooling tower will be  
24 equipped with high efficiency drift eliminators  
25 and only emit a very small amount, less than three

1       percent of the total of the PM10 due to drift as  
2       water evaporates from the tower.

3               Most of these emissions will be  
4       deposited in the vicinity of the tower.  Although  
5       an air cooled condenser doesn't directly emit the  
6       M10, it does reduce the efficiency of the power  
7       plant.  Additional emissions of all pollutants,  
8       either from Palomar or elsewhere, would be caused  
9       to the combustion of fuel to make up for the power  
10      loss.

11             A large air cool condenser structure  
12      would also create down wash, which could create  
13      maximum ground level impacts -- which could  
14      increase, I'm sorry, the maximum ground level  
15      impacts from the project.

16             The gas turbine will emit ammonia as a  
17      result of "slip" or ammonia that isn't used in the  
18      reaction of the SCR emission control system.  The  
19      cooling tower may also emit small amounts of  
20      ammonia that is present in the water; the ammonia  
21      emissions from the cooling tower have been  
22      addressed in the testimony of Mr. Don Schilling.

23             Although the District and EPA approved a  
24      10 ppm ammonia slip limit in the PSD permit,  
25      Palomar has agreed to the Staff-recommended 5 ppm

1 ammonia slip from the stacks. Some of the  
2 directly emitted pollutants, such as sulphur  
3 dioxide and ammonia, will convert in the  
4 atmosphere to form secondary particulate.

5 Although ammonia is a precursor to PM10,  
6 only a small portion of the Palomar Energy ammonia  
7 emissions are expected to be converted to PM10 in  
8 the atmosphere in the vicinity of the project.  
9 The testimony of Dr. Heisler provides an estimate  
10 of how much of these emissions could be converted.

11 Staff concluded that with appropriate  
12 funding of PM10 and PM10 precursor mitigation  
13 programs in the local area and capping the ammonia  
14 slips that impact would be reduced to a level of  
15 insignificance.

16 An impact analysis was prepared using  
17 accepted modeling techniques, the same models that  
18 were used for the Otay Mesa case. An additional  
19 analysis was required by the San Diego APCD for  
20 PM10 that looked at specific days near the 24-hour  
21 standard. All impacts were found to be  
22 insignificant.

23 As mitigation, ozone precursor emissions  
24 were offset by required by the San Diego Air  
25 Pollution Control District rules. A combination

1 of NOx and VOC emission reduction credits have  
2 been identified and will be applied at the various  
3 ratios required.

4 At the pre-hearing conference the San  
5 Diego APCD noted an issue with a small amount,  
6 less than a ton, of one of the credits currently  
7 under their review. Palomar is continuing to work  
8 with the District to resolve their questions about  
9 the credit.

10 As a contingency Palomar has identified  
11 an additional 15 tons of credit that could be made  
12 available to the project. San Diego APCD rules  
13 only require offsets to be in effect and  
14 enforceable at the time of start up of the  
15 emission unit requiring the offset.

16 Although PM10 impacts were found by the  
17 San Diego Air Pollution Control District to be  
18 insignificant, and offsets are not required for  
19 Palomar under San Diego APCD or EPA rules, Palomar  
20 has agreed to provide PM10 mitigation in the form  
21 of funding to the San Diego Air Pollution Control  
22 District for emission reduction projects.

23 The Palomar plan will fund PM10, PM10  
24 precursor and diesel particulate reduction  
25 projects that will reduce the regional particulate

1 loading. Palomar has agreed to the funding level  
2 recommended by Staff, which Staff concludes will  
3 reduce direct and secondary impacts from PM10 and  
4 PM10 precursor emissions to a level of  
5 insignificance.

6 The funding level of the PM10 plan is  
7 based on worst-case Palomar PM10 and sulphur  
8 dioxide emissions as secondary precursors. Since  
9 not all of the sulphur dioxide or ammonia are  
10 expected to become secondary PM10, Dr. Heisler has  
11 provided rebuttal testimony that demonstrates the  
12 mitigation is more than adequate, even with very  
13 conservative assumptions regarding the potential  
14 emissions.

15 A number of mitigation measures to be  
16 implemented during the construction phase were  
17 recommended by staff in the final staff  
18 assessment. For instance, Palomar will develop a  
19 dust control plan and use catalyzed particulate  
20 diesel filers, that is soot filters, to reduce  
21 construction phase emissions.

22 Implementation of these mitigation  
23 measures during construction will reduce project  
24 construction impacts to a level of insignificance.  
25 In terms of cumulative impact a modeling analysis

1 was performed to assess the cumulative air quality  
2 impact that included the two small power plants in  
3 the vicinity, CalPeak and RAMCO plants.

4 These two small power plants were the  
5 only sources determined by the San Diego Air  
6 Pollution Control District that would contribute  
7 to a cumulative impact with Palomar Energy. The  
8 cumulative modeling was reviewed and approved by  
9 the District. The additional impacts from the two  
10 small power plans were found to be negligible.

11 The cumulative impact of Palomar with  
12 the traffic of the Escondido Research and  
13 Technology Center has been raised during the  
14 proceeding. The Palomar power plant is fully  
15 mitigated and the project will add less than a  
16 dozen cars during operation.

17 Therefore, Palmar does not make a  
18 cumulatively considerable contribution to traffic  
19 emission. However, there are also a number of  
20 state and federal programs underway to address the  
21 regional traffic issue that will reduce mobile  
22 source emissions.

23 In summary, the Palomar Energy project  
24 will have an insignificant impact on air quality.

25 MR. MILLER: Thank you. Now, the next



1 two -- I think what I'll do is call on Dr. Heisler  
2 next to give his testimony, and then I'll just  
3 move the other (inaudible). And so I'll go to Dr.  
4 Heisler.

5 Thereupon,

6 STEVE HEISLER

7 was called as a witness herein and, after having  
8 first been duly sworn, was examined and testified  
9 as follows:

10 DIRECT EXAMINATION

11 BY MR. MILLER:

12 Q Would you state your name and occupation  
13 for the record.

14 A My name is Steven Heisler. I'm a senior  
15 program manager with ENSR International.

16 Q And what is your profession?

17 A I'm an environmental consultant  
18 specializing primarily in air quality issues.

19 Q Could you please describe your  
20 educational background and your occupational  
21 experience related to your testimony in this  
22 proceeding?

23 A I have a bachelor's of science degree, a  
24 Master's of Science and Doctor of Philosophy and  
25 Environmental Engineering Science, all from

1 California Institute of Technology. I have over  
2 27 years experience in air quality consulting  
3 looking at various issues such as disability,  
4 reduction in urban areas, emissions in various  
5 sorts of projects, atmospheric particular  
6 measurement and data analysis, and data  
7 interpretation.

8 I've estimated emissions from both on  
9 and off road sources for several environmental  
10 assessments. I've also managed several ambient  
11 air quality studies to evaluate visibly reduction  
12 in urban areas.

13 Q And what aspects of your job activities  
14 are related to the Palomar Energy project?

15 A I conducted various portions of the air  
16 quality analysis.

17 Q And the purpose of your testimony is  
18 what?

19 A It consumes the air pollutant emissions  
20 anticipated during project construction with  
21 potential impacts of PM10 precursory emissions  
22 during operation, the project on secondary PM10  
23 formation. Any emission reductions that might be  
24 achieved by undertaking emission reduction  
25 projects in the project area.

1           Q     Now, let's see, I have so many exhibits.  
2     Could you please indicate what portions of the  
3     application for certification you would be  
4     sponsoring?

5           A     Along with Sara Head, I'm co-sponsoring  
6     the portion of Exhibit One, the AFC section 5.2.3  
7     addressing emissions during construction, the  
8     portion of section 5.2.6 addressing emissions  
9     during construction of the ERTC industrial part,  
10    independently E dot 2 and E dot 6.

11          Q     Okay. And are you sponsoring any  
12    portions of any other exhibits?

13          A     Also Exhibits 2A and 2D, data responses  
14    numbers 14 and 15, Exhibits 17, which is the  
15    Palomar Energy PM10 mitigation plan, and Exhibit  
16    18, emission of reduction calculations.

17          Q     All right. I'm going to ask you to  
18    summarize now your direct testimony, which is very  
19    brief, and then also Dr. Heisler submitted  
20    rebuttal testimony as well. And I'll ask him to  
21    summarize.

22          A     Regarding the direct testimony, I have  
23    reviewed and concurred with the project  
24    construction emissions of the potential effects  
25    the project PM10 emissions precursor emissions on

1 secondary PM10 formation that were presented  
2 previously, and a remission reductions that might  
3 be achieved in the project vicinity as set forth  
4 in the air quality testimony of Sara Head, which  
5 was just filed, or just presented.

6 Q And with regard to your rebuttal  
7 testimony.

8 A Mr. Powers requested that a good faith  
9 effort be made to address the potential formation  
10 of secondary PM10 in the project area using data  
11 from San Diego. And he also requested that  
12 ammonia emissions be included in these analysis.  
13 I did conduct an analysis that did address the  
14 potential for formation, including ammonia from  
15 the cooling tower by the way.

16 And based on these analysis concluded  
17 that only a small percentage of the ammonia in  
18 sulphur dioxide emissions would be actually  
19 converted to secondary PM10. The amount was small  
20 enough that the mitigation provided by the  
21 mitigation funding is more than enough to cover  
22 the amount that actually would be converted.

23 Q Thank you.

24 MR. MILLER: I'm now going to present  
25 the other two witnesses by declaration. First the

1 declaration testimony of Howard Balentine is  
2 included in our pre-file testimony. And it just  
3 occurred to me that if you do want to have  
4 questions of these two individuals I probably  
5 should present their credentials for you.

6 MR. BRIGGS: We'd stipulate.

7 MR. MILLER: Okay.

8 HEARING OFFICER GEFTER: Yes, Staff  
9 stipulates.

10 MR. BRIGGS: We stipulate.

11 MR. MILLER: Okay.

12 HEARING OFFICER GEFTER: Okay. So the  
13 parties stipulate to their credentials.

14 MR. MILLER: All right.

15 HEARING OFFICER GEFTER: If you would  
16 just quickly tell us what their testimony refers  
17 to.

18 MR. MILLER: Yes.

19 HEARING OFFICER GEFTER: Okay.

20 MR. MILLER: Mr. Balentine conducted the  
21 computer modeling for the air quality impact  
22 analysis. And he sponsors the application for  
23 certification Exhibit One, section 5.2, air  
24 quality with respect to computer model, and also  
25 Exhibit E, which are the emission estimates for

1 the project.

2 HEARING OFFICER GEFTER: Exhibit, say  
3 that again? Exhibit E or Appendix E?

4 MR. MILLER: I'm sorry, actually it is -  
5 - we have an Exhibit E to the AFC.

6 HEARING OFFICER GEFTER: Yeah. Appendix  
7 C, I'm sorry.

8 MR. MILLER: Appendix C.

9 HEARING OFFICER GEFTER: Appendix C.

10 MR. MILLER: All we have here is a typo  
11 actually.

12 HEARING OFFICER GEFTER: Okay.

13 MR. MILLER: And also, Exhibit 2A, date  
14 of response is ten and 12. Okay. And that  
15 concludes -- and I'm not going to be moving these  
16 until after direct. So the next business is  
17 Mr. Alberto Abreu. Mr. Abreu is director of  
18 permitting licensing for separate energy  
19 resources.

20 And his testimony primarily concerns the  
21 project's air emission offset requirements. He's  
22 sponsoring Exhibit One, AFC, section 5.2, air  
23 quality with respect air emission offsets. And  
24 also Exhibit 2F, date of response 16, and Exhibit  
25 34, a separate energy resources letter to the San

1 Diego Air Pollution Control District.

2 And I believe that would conclude our  
3 direct testimony presentation.

4 MR. BRIGGS: Ms. Gefter, can I just  
5 clarify something? I had written on my notes from  
6 a hearing order that Don Schilling was to be  
7 added. I have it listed under public health and  
8 air quality. Is the only public health --

9 MR. MILLER: That was my error.

10 MR. BRIGGS: Okay.

11 MR. MILLER: He was in fact only  
12 submitted pre-health testimony for health.

13 MR. BRIGGS: So he's only going to be  
14 when we get to public health?

15 MR. MILLER: Yes.

16 MR. BRIGGS: Okay. Thank you. Sorry.

17 HEARING OFFICER GEFTER: That's fine.  
18 Okay. We're going to take direct testimony from  
19 Staff. And then we'll give the Intervenor an  
20 opportunity to cross examine at that time. And  
21 then you can do your direct testimony.

22 MR. MILLER: I'm sorry, I neglected to  
23 refer to the Air District at this point.

24 HEARING OFFICER GEFTER: Okay. Do you  
25 want to offer their testimony now?

1 MR. MILLER: Yes, I think that might be  
2 appropriate.

3 HEARING OFFICER GEFTER: Why we don't do  
4 that then. Let's ask the representatives from the  
5 District to come forward. And let's try to make  
6 some space for them at the table with you while  
7 they're testifying. I think we made some seats  
8 available for the Air District representatives.  
9 Okay. Let's ask the reporter to swear the witness  
10 and then we'll identify them for the record.  
11 Okay.

12 MR. MILLER: I believe what --

13 HEARING OFFICER GEFTER: First we'll ask  
14 them to identify themselves.

15 MR. MILLER: Okay. I'm sorry. Excuse  
16 me.

17 HEARING OFFICER GEFTER: Mr. Speer, do  
18 you want to begin. Just tell us who you are and  
19 what your position is with the Air District.

20 MR. SPEER: My name is Dan Speer. I'm a  
21 senior engineer with the San Diego Air Pollution  
22 Control District.

23 HEARING OFFICER GEFTER: Thank you.

24 MR. LAKE: Michael Lake, assistant  
25 director, Air Pollution Control District.



1 MR. DESIENA: Ralph Desiena. I'm a  
2 meteorologist and a modeler for the Air Pollution  
3 Control.

4 HEARING OFFICER GEFTER: Thank you.

5 MR. MILLER: In our referral of the  
6 questions here up to the (indiscernible) issues  
7 that were raised in pre-hearing conference and  
8 included in our testimony, I did not request them  
9 to have a presentation of the project or their  
10 permit. If they would like to summarize their  
11 review and their issues that would fine.

12 But (indiscernible) to do that. I did  
13 expect some questions from the Hearing Officer  
14 that they might be asked to respond to. So it was  
15 primarily for that purpose that I brought  
16 (inaudible).

17 HEARING OFFICER GEFTER: Do you have any  
18 prepared comments for us that you'd like to offer?  
19 No?

20 MR. SPEER: No.

21 HEARING OFFICER GEFTER: All right. I  
22 think the question that was pending, and remains  
23 pending, it was raised by Mr. Powers, is the new  
24 standard for PM10. That has been adopted by the  
25 ARB. And I think the information that we have to

1 date is that Air District has not adopted  
2 regulations to implement that standard.

3 So if you could explain to us what's  
4 going on with that, perhaps that would give us  
5 some contacts to discuss it further.

6 MR. SPEER: We actually did a little  
7 research on this issue of the standard has been  
8 adopted by the Air Resources Board. However, it's  
9 subjected to a review process to the State  
10 Administrative Law Agency. And it was just  
11 recently submitted to them, my understanding is  
12 last Wednesday.

13 It's expected to take at least 30 days  
14 for them to review that. Once they have done that  
15 then it will go back to the Air Resources Board  
16 for drafting of implementation procedures. So as  
17 it stands right now this standard is not one that  
18 we can subject applicants to.

19 HEARING OFFICER GEFTER: Okay. And what  
20 you're waiting for from the ARB is implementing  
21 regulations that you would then adopt at the local  
22 district level?

23 MR. SPEER: Typically they would adopt  
24 guidelines and then we would be responsible to  
25 adopt regulations to implement.

1           HEARING OFFICER GEFTER: All right.  
2       Okay. And then also testimony the Applicants have  
3       submitted indicated that even with the new lower  
4       level for PM10 emissions indicated that that would  
5       not make a difference in terms of BACT or any  
6       other mitigation measures that you would require  
7       for a power plant such as the Palomar project.

8           I didn't follow that. Maybe I'm  
9       misconstruing what the Applicant said. Are you  
10      familiar with that testimony?

11           MR. LAKE: I'll try to answer that  
12      question

13           HEARING OFFICER GEFTER: Yeah.

14           MR. LAKE: Based on the analysis that  
15      the Air District did of the PM10 emissions from  
16      the power plant, and from the cooling tower, those  
17      PM10 emissions were in compliance with all the Air  
18      District's requirements. Now, what we look at is  
19      whether or not those PM10 emissions would cause  
20      any new violations of either the state PM10  
21      standard or the federal PM10 standards.

22           Those analysis were done and the  
23      conclusion was that they would not cause any new  
24      exceedences of any PM10 standards at any location  
25      off site of the power plant. As Dan Speer

1 mentioned, the new state PM10 standard is not yet  
2 in effect. And until that is effect, and until  
3 ARB passes guidance and we adopt regulations, we  
4 would not be able to make a permitting decision  
5 based on impacts relative to the new state PM10  
6 standards.

7 And I might mention as on a side, the  
8 background materials for the new state PM10  
9 standards indicate that virtually all metropolitan  
10 areas in California far exceed that new PM10  
11 standard. So the implementation requirements will  
12 have to be crafted to have a balanced approach to  
13 looking at both existing and new sources relative  
14 to that PM10 standard.

15 HEARING OFFICER GEFTER: Okay. Thank  
16 you very much. What I was referring to is some  
17 testimony by Sara Head who, in your written  
18 testimony you indicated that, and I'll just quote  
19 what you said, "Even though the current annual  
20 PM10 standard was attained in Escondido, the new  
21 lower standard will not change the attainment  
22 status of the county."

23 So in other words, it's a nonattainment,  
24 and the new standard it would still be -- I mean  
25 it's even a more conservative standard. So it

1 would remain a nonattainment. Is that your intent  
2 for that statement?

3 MS. HEAD: Yes.

4 HEARING OFFICER GEFTER: All right.

5 MS. HEAD: That's what I was referring  
6 to.

7 HEARING OFFICER GEFTER: Okay.

8 MS. HEAD: They didn't change the  
9 attainment status.

10 HEARING OFFICER GEFTER: Yeah. Okay.  
11 Thank you. And then I had another question with  
12 respect to the monitoring stations that the  
13 Applicant used for compiling data. There was one  
14 monitoring station in Escondido and there was  
15 several monitoring stations all over the county.

16 And in terms of how you review the  
17 application, did you average the data from each of  
18 those stations? How were you using data from the  
19 stations where you might have a different climate  
20 and you might have a different terrain and that  
21 sort of thing? How was that relevant to what you  
22 looked at for this project in Escondido?

23 MS. HEAD: Are you directing that to me?

24 HEARING OFFICER GEFTER: Well, actually,  
25 I'm asking the Air District. It's their stations

1 and they did the review.

2 MR. LAKE: Ralph Desiena is our  
3 associate and he'll respond to that.

4 HEARING OFFICER GEFTER: Thank you.

5 MR. DESIENA: Well, we chose the  
6 Escondido monitoring station because it is a  
7 downwind from the location of the Palomar Energy  
8 project. And it to us is the most representative  
9 side for background air quality data of all our  
10 air quality sites in the county. And it's just a  
11 few miles downwind actually.

12 HEARING OFFICER GEFTER: So you rely on  
13 that station?

14 MR. DESIENA: Yes.

15 HEARING OFFICER GEFTER: But in the  
16 Applicant's testimony they talk about data from  
17 several different monitoring stations throughout  
18 the county. Was that data relevant? Or you're  
19 not familiar with that?

20 MR. DESIENA: No, in terms of the  
21 meteorology and the air quality, the way the data  
22 is processed for modeling we acquire data at our  
23 Escondido monitoring station for surface  
24 parameters. And the only upper air station is the  
25 Miramar NAS station.

1           And it's a combination of those two  
2       types of data that are required to build a data  
3       set for whatever the particular model that's going  
4       to be used. I was talking about the air quality,  
5       the background criteria data earlier.

6           HEARING OFFICER GEFTER: Yeah. Okay.  
7       All right. Thank you. And I have another  
8       question, and this is sort of a general question.  
9       And while we're on the topic, and I have the  
10      District representatives here, one of the other  
11      questions that has come up is that the project  
12      itself is going to be cut into the ground. So  
13      it's going to actually be a lot lower than surface  
14      level.

15           And so that means that the tower, even  
16      though the exhaust power is going to be very tall,  
17      it won't be that high above the surface, the  
18      ground. So a concern was raised as to whether or  
19      not the dispersion of pollutants that might be  
20      emitted from the exhaust stacks would actually  
21      disperse closer to the plant and closer to the  
22      residences in sensitive receptors, than they would  
23      otherwise if the project were built at a higher  
24      level.

25           And is there some sort of explanation

1       for the public to explain how you model that and  
2       how you determined that that would not result in  
3       significant impacts in terms of pollutants?

4               MR. DESIENA: Well, okay, actually,  
5       Howard Balentine, the consultant that worked on  
6       the project did the modeling. But I believe that  
7       was taken into account in terms of adjustment of  
8       the stack height with relationship to the terrain  
9       in order to simulate the effects of the wind flow  
10      that the power plant would see. And, therefore,  
11      the concentration is downwind.

12             HEARING OFFICER GEFTER: Okay. And I  
13      think that is an important question. So perhaps  
14      Mr. Balentine, even though I'm asking questions  
15      right now, I'm not giving Mr. Powers the  
16      opportunity to cross examine. But we might as  
17      well get that information on the table.

18             So perhaps Mr. Balentine can come  
19      forward and explain to us how you did the modeling  
20      and how you came up with your determination that  
21      in fact sensitive receptors would not be impacted  
22      by pollutants from the stacks.

23             MR. BALENTINE: Okay. The air quality  
24      modeling was conducted with two models, one was  
25      called IFCST and one was called Air Mod. And in



1 both of those you can account for the effect of  
2 what's called building down wash or the air  
3 dynamic weight of structures in building, and  
4 other features in the vicinity of the release  
5 points, or the stacks out which the pollutants are  
6 emitting.

7 And the EPA has a standardized program  
8 to use to compute what those parameters to go into  
9 model to account for the added dispersion that  
10 will occur due to being adjacent to structures or,  
11 in this case, in the whole. Because this was a  
12 unique situation we made some adjustments that  
13 were -- that we discussed with the District to  
14 allow us to account for the fact that it had --  
15 the project itself was sitting in a hole.

16 But what we were looking at was the  
17 amount of structure that was above the ridge line.  
18 And so we made adjustments to the input to this  
19 EPA model who then produced output that was input  
20 into the air quality lot. It's a chain of events.

21 But we used standardized EPA techniques  
22 to estimate the parameters that describe the  
23 dispersion potential associated with the wakes of  
24 the buildings and structures. And then those  
25 parameters go into the two air quality models and

1 look at -- you know, then allow you to predict the  
2 dispersion downwind.

3 HEARING OFFICER GEFTER: All right. Do  
4 you have more? I'm sorry, I didn't mean to cut  
5 you off.

6 MR. BALENTINE: No, that was --

7 HEARING OFFICER GEFTER: Yeah. Okay. I  
8 appreciate that.

9 MR. BALENTINE: And the modeling show,  
10 all the concentration off site, were below the  
11 applicable standard, the health risk were below  
12 the values. And so whether a, you know, you would  
13 have maybe had different numbers, but all the  
14 numbers that we got out of our modeling were below  
15 the applicable standard and health risks.

16 HEARING OFFICER GEFTER: Okay. And I  
17 understand that the District was satisfied with  
18 that analysis.

19 MR. DESIENA: Yes, that's correct. I  
20 reviewed the modeling and they did follow all EPA  
21 and California Air Resources Board, and our own  
22 District guidance in performing their evaluation.

23 HEARING OFFICER GEFTER: Okay. Thank  
24 you. And I do have another question on a  
25 different topic somewhat. In talking about

1 ammonia slip again, which is a concern that  
2 Mr. Powers raised -- actually, Ms. Head, in her  
3 testimony indicated that of course there would be  
4 less ammonia slip when you have a new catalyst,  
5 new SCR catalyst installed or, you know, a newer  
6 of the SCR catalyst.

7 And I'm wondering how often the SCR  
8 catalyst is replaced to, you know, make sure the  
9 ammonia slip or any ammonia emissions are  
10 controlled so that you maintain your below 5 ppms  
11 limit?

12 MR. SPEER: I can't speak to how often  
13 it will be controlled. This is an operational  
14 characteristic that's going to have to be  
15 monitored and determined. However, I wanted to  
16 point out it is the oxidation catalyst that  
17 actually reduces that pollutant. So I'll leave  
18 the timing or the period of replacement to the  
19 Applicant to specify for you.

20 HEARING OFFICER GEFTER: Okay. Thank  
21 you. Mr. Rowley. Mr. Rowley is still under oath  
22 even though you didn't testify on air quality.

23 MR. MILLER: And I think we might have  
24 mentioned that we were expecting him to  
25 potentially answer questions in air quality.

1 HEARING OFFICER GEFTER: All right.

2 MR. ROWLEY: As they relate to project  
3 design and operation. The way that we assess the  
4 life of the catalyst is really what we do is we  
5 assume -- we don't assume, we look at the  
6 performance of the catalyst at the end of its  
7 life. At the beginning of its life it's always  
8 going to be better.

9 But what matters is what is the  
10 performance of the catalyst at the end of its  
11 life. And so when we talk about 5 ppm slip that's  
12 the end of life, worst performance. Earlier it's  
13 better. Typically, the catalyst will last three  
14 to five years before it reaches that end of life.

15 And it's really the ammonia slip that  
16 tells us that the catalyst is worn out and it's  
17 time to replace it.

18 HEARING OFFICER GEFTER: Okay. And how  
19 are you monitoring the ammonia slip?

20 MR. ROWLEY: There are conditions of  
21 certification that we have to follow that require  
22 that we monitor slip.

23 HEARING OFFICER GEFTER: Okay. The  
24 CEM's?

25 MR. ROWLEY: It's not a CEM. It's a

1 periodic test.

2 HEARING OFFICER GEFTER: Periodic test.

3 MR. ROWLEY: Yeah. There's really not a  
4 reliable CEM available for ammonia.

5 HEARING OFFICER GEFTER: Okay. But how  
6 often is the testing required?

7 MR. ROWLEY: I don't recall off hand,  
8 but it's a condition of certification.

9 HEARING OFFICER GEFTER: Okay.

10 MR. ROWLEY: Which we accepted.

11 HEARING OFFICER GEFTER: And you can  
12 identify which condition of certification it is  
13 per Mr. Powers?

14 MR. ROWLEY: Yeah.

15 HEARING OFFICER GEFTER: At some point,  
16 we don't have to do it right this minute.

17 MR. ROWLEY: Yeah.

18 HEARING OFFICER GEFTER: Okay. And I'm  
19 expected you'd be familiar with it as well. All  
20 right. Rather than taking up more time why don't  
21 we allow Mr. Powers to cross examine the  
22 Applicant's witnesses, and also your District's  
23 representatives if you wish.

24 MR. KRAMER: Were we going to go with  
25 the Staff's witness?

1 HEARING OFFICER GEFTER: I'm sorry. We  
2 missed Staff's witnesses.

3 MR. KRAMER: And also, we had a couple  
4 of questions for the District because we're  
5 sponsoring some of their testimony as well.

6 HEARING OFFICER GEFTER: Okay. I'm  
7 sorry. Yes, Mr. Kramer, go forward.

8 MR. KRAMER: So before we go to our  
9 witnesses let me ask a couple of questions of the  
10 District. The final determination of the  
11 compliance, which is Exhibit 52, that is the  
12 statement of the District, it's opinion as to the  
13 air quality aspects of this project, is that  
14 correct?

15 MR. SPEER: Our final determination with  
16 compliance is our findings after evaluation of the  
17 project that it is capable of complying with all  
18 of the District's rules and regulations, as well  
19 as state and federal regulations.

20 MR. KRAMER: And then after you sent  
21 that to the Commission, did you also send a  
22 supplement to the final determination of  
23 compliance reporting the PSD determination of EPA?

24 MR. SPEER: Yes, we did.

25 MR. KRAMER: Okay. That's our Exhibit

1       53. And did you receive a letter from Mr. Rios of  
2       the EPA, Federal EPA's Permit Office, and  
3       approximately February 27 of this year reporting  
4       that their determination on your PSD  
5       determination?

6               MR. SPEER: Yes, we did.

7               MR. KRAMER: Okay. That's Exhibit 54.  
8       So we would be -- eventually we'll be sponsoring  
9       it, but I'll just say it now, Exhibit 50, 51, 52,  
10      53, 54 and 56 all with regard to air quality.

11              HEARING OFFICER GEFTER: Okay.

12              MR. KRAMER: Another question for the  
13      District, regarding to offset PM10 the Staff is  
14      required as a condition program where the  
15      Applicant where pay the two installments, 1.86  
16      million dollars to the District to be used for  
17      various programs to obtain PM10 emission  
18      reduction, correct?

19              MR. SPEER: That's correct.

20              MR. KRAMER: And that was imposed by the  
21      Staff in addition to the conditions that the  
22      District proposed, is that correct?

23              MR. SPEER: That's correct.

24              MR. KRAMER: Okay. I think that covers  
25      it with the District. Now I need to have the

1 Staff sworn.

2 HEARING OFFICER GEFTER: Okay. That's  
3 fine. Have the Staff witnesses sworn. Would you  
4 identify the witnesses first before you continue.  
5 Thereupon,

6 BREWSTER BIRDSALL, MATTHEW LAYTON  
7 were called as witnesses herein and, after having  
8 first been duly sworn, was examined and testified  
9 as follows:

10 DIRECT EXAMINATION

11 MR. KRAMER: Please state your names and  
12 spell your last name.

13 MR. BIRDSALL: My name is Brewster  
14 Birdsall. I'm a contractor with the -- excuse me,  
15 back up. Last name is B-I-R-D-S-A-L-L. I'm a  
16 contractor working for the Energy Commission on  
17 the subject of air quality on this case, employed  
18 by Aspin Environment Group.

19 MR. LAYTON: My name is Matthew Layton,  
20 L-A-Y-T-O-N. I'm a senior mechanical engineer  
21 with the Air Unit of CEC. I worked with Brewster  
22 preparing the testimony.

23 MR. KRAMER: Okay. If I have a  
24 stipulation as to their expert qualifications we  
25 can avoid --



1 MR. MILLER: Yes, we'd be happy to  
2 stipulate to that solely.

3 MR. KRAMER: Thank you.

4 BY MR. KRAMER:

5 Q Mr. Birdsell, you prepared the final  
6 staff assessment in this case on air quality,  
7 correct?

8 A Yes, I did.

9 Q Could you briefly summarize of what you  
10 learned and your conclusions.

11 A Sure.

12 HEARING OFFICER GEFTER: Could you move  
13 the mike closer. Thank you.

14 MR. LAYTON: Okay. Is that it? I  
15 prepared the final staff assessment for the air  
16 quality topic on the Palomar Energy project. And  
17 in the process of that analysis we take a look a  
18 couple of things that set up the baselines  
19 conditions for the project, and then the  
20 environmental impacts.

21 In the baseline conditions, as has  
22 already been pointed out tonight, we look at the  
23 air quality existing in the region and locally,  
24 and determine whether or not the MBE air quality  
25 meets or exceeds the applicable attainment

1 standards. In the case of ozone and particulate  
2 matter in this area of Escondido, the ozone  
3 concentrations do exceed the state and federal air  
4 quality standards.

5 The PM tank concentrations do exceed the  
6 state ambient air quality standards, and they meet  
7 the federal ambient air quality standards. The  
8 determination of whether or not PM10  
9 concentrations exceed these state ambient air  
10 quality standards is not changed by the new  
11 ambient air quality standard that is coming.

12 This is a change that ARB proposed last  
13 summer and is being approved right now by the  
14 Office of Administrative Law. It doesn't alter  
15 the way that we approach this project because, as  
16 I said, when we began the project the area had  
17 already been designated as a nonattainment area  
18 for PM10.

19 With that information on the baseline  
20 and the existing air quality, we take a look at  
21 the project sources. The major project sources  
22 here are of course the combustion turbines and the  
23 duct burning system, which contribute  
24 approximately 124 tons per year of nitrogen  
25 oxides, which is a precursor to ozone. And they

1 also contribute approximately 102 tons per year of  
2 PM10.

3 Another major source at the Palomar  
4 Energy project is the cooling tower. And Staff  
5 has concluded that the cooling tower emits  
6 approximately six tons per year of PM10. The  
7 emission rates, or the emissions, for nitrogen  
8 oxides -- I'm sorry, let me back up.

9 Once we've looked at the emission rates  
10 for the pollutants of concern, we take a look at  
11 the local district requirements and whether or not  
12 the project is likely to meet the local district  
13 requirements. This is where the District's final  
14 determination of compliance comes in.

15 And as it has been pointed out, this  
16 document was issued around December of 2002. The  
17 District requires that all emissions of those  
18 precursors be offset through compliance with the  
19 program to obtain and surrender emission reduction  
20 credits.

21 The Applicant provided information on  
22 the emission reduction credits that they would be  
23 likely to surrender. We've reviewed those  
24 emission reduction credits and determined that the  
25 project would be likely to comply with the

1 District requirements to offset the project  
2 emissions of nitrogen oxides.

3 And that by submitting the emission  
4 reduction credits the air quality impacts to ozone  
5 precursors would be reduced to a less than  
6 significant level. The question of particulate  
7 matter has been one of much debate through the  
8 workshops and right up until the final rounds of  
9 rebuttal testimonies.

10 The Energy Commission looked at the  
11 overall inventory of PM10 precursors that would be  
12 emitted from the sources at the project, and this  
13 includes the 102 tons per year from the turbines  
14 and the combustion system, as well as the six tons  
15 per year from the cooling tower.

16 With this quantity of PM10 emissions  
17 occurring locally to the area, which is a  
18 nonattainment area for the state standard, Staff  
19 saw a program to fully offset the emissions of  
20 PM10, and also the emissions of sulphur oxides,  
21 which are a precursor to PM10.

22 We tallied up the total emissions of  
23 PM10 and sulphur oxides, and prepared a strategy  
24 and an analysis that looked for sources locally  
25 and looked for likely programs that the District

1 could implement to obtain reductions in sufficient  
2 quantities to fully reduce these PM10 and sulphur  
3 oxide emissions.

4 The Applicant provided a PM10 mitigation  
5 plan around the time of the October workshop, and  
6 took a look at a number of strategies and  
7 potential sources for PM10 control. Some of those  
8 strategies involved paving of roads at neighboring  
9 landfills. Some of the strategies involved  
10 controlling local mobile sources of diesel  
11 particulate matter.

12 And with this information and their work  
13 on identifying some local sources to control, we  
14 went back to the drawing board and developed a  
15 strategy that would allow the Applicant to pay the  
16 mitigation fee that's been mentioned to the Air  
17 Quality Management District to fully mitigate the  
18 PM10 and sulphur oxide impacts that were not, in  
19 our view, mitigated by compliance with the  
20 emission reduction credit program, which only  
21 addressed the ozone precursors.

22 The PM10 mitigation plan, we found would  
23 reduce the impacts of the PM10 and PM10 precursors  
24 to a less than significant level. We have also  
25 looked at other PM10 precursors, including ammonia

1 slip and ammonia from the cooling tower.

2 We evaluated the emission rates from the  
3 ammonia slip that were originally proposed by the  
4 Applicant at a rate of 10 ppm and determined that  
5 additional control would be necessary to meet the  
6 Energy Commission's performance standards and  
7 reduce the impact of that pollutant to a level of  
8 insignificance.

9 And at that point we proposed a  
10 condition of certification to reduce the ammonia  
11 slip to a five ppm level from ten, and the  
12 Applicant has agreed to that. With those measures  
13 in place we determined that all residual impacts  
14 had been reduced to a less than significant level.  
15 And that concludes my summary.

16 BY MR. KRAMER:

17 Q When you review the projects such as  
18 this, do you look at the individual sources of air  
19 pollutants individually or do you consider the  
20 project as a combination of all of its sources?

21 A We tend to look at the pollutants  
22 individually as they are individually responsible  
23 for different effects in the environment.

24 Q Okay. But, no, I was asking about the  
25 sources. For instance, here you said there's a

1 combustion turbine, the steam turbine, cooling  
2 tower.

3 A Okay.

4 Q Do you look at all of them as a group or  
5 individually?

6 A I misunderstood your question. We look  
7 at the facility as whole.

8 Q Okay. Now, there's been some concern  
9 expressed in this case about ammonia coming from  
10 the cooling towers, specifically from the  
11 reclaimed water that's proposed to be used it in.  
12 Have you examined that as a source of concern?

13 A We sure have. The ammonia emissions  
14 from the cooling tower have been examined as a  
15 potential precursor to particulate matter. And  
16 we've considered some of the variabilities in that  
17 reaction of ammonia emissions to PM10 formation,  
18 and determined that the project is controlled to a  
19 level that would reduce impacts to a level of  
20 insignificance.

21 Q So are you saying any amount of ammonia  
22 that might convert is small enough in your mind  
23 that it falls to a level of insignificance?

24 A That's correct, in short.

25 Q In one of the conditions you've required

1 some types of monitoring with regard to the  
2 reclaim water use. Could you explain the purpose  
3 that?

4 A I believe you're referring to the  
5 monitoring of cooling tower operation that --

6 Q Right.

7 A -- provides for us hopefully information  
8 on how the ammonia in the reclaimed water will  
9 behave once it's subject to the operational cycle  
10 of the cooling tower. The reclaimed water has a  
11 quantity of ammonia in the water itself. The  
12 reclaimed water is used in the cooling tower, and  
13 recycled over and over again, and exposed to the  
14 atmosphere.

15 And we at Staff, we've seen and reviewed  
16 calculations from the Applicant as well as the  
17 Intervenor on the emission rates, the emission  
18 rates of ammonia that could occur from the cooling  
19 tower based on different operational scenarios. A  
20 number of variables affect the ammonia emission  
21 rate from the cooling tower, among them the flow  
22 of the recycled water, the number of the cycles of  
23 concentration of that recycled water in the  
24 cooling tower and the cooling system.

25 Those are also the number of cycled



1 concentration is also going to affect the  
2 concentration of ammonia itself. And the  
3 concentration of the ammonia that comes from the  
4 waste water treatment facility is also a variable.  
5 The ph of the water in the cooling tower is a  
6 variable that effects the overall ammonia emission  
7 rate.

8 And what we've done is we've sort  
9 consolidated these variables into a pair of  
10 conditions of certification and recommended that  
11 the Applicant monitor the flow rate of the  
12 recycled water in the cooling tower, monitor the  
13 ammonia concentrations, and monitor the ph.

14 Because we feel that the ammonia  
15 emission rates are widely variable depending on  
16 how the ph and how the ammonia concentrations pan  
17 out.

18 Q Okay. And what does Staff plan to do  
19 with this information?

20 A The intent of these two conditions of  
21 certification, and these are for post conditions  
22 of certification, SC8 -- rather AQSC8 and SC9.  
23 The intent here is to gain a body of knowledge of  
24 how the recycled water behaves in the cooling  
25 tower. The idea here is to educate the Energy

1 Commission Staff on how likely ammonia emissions  
2 are from these types of sources.

3 There have been some recent projects  
4 that proposed recycled water in the cooling  
5 towers. There is also concern that ammonia is a  
6 precursor to PM10. And because of this, the Staff  
7 is interested in learning more about how the  
8 ammonia behaves in a cooling tower.

9 And with information on ammonia inlet  
10 concentrations from the waste water facility, and  
11 information on the ammonia concentrations in the  
12 cooling tower water, it would be possible to do a  
13 mass balance on the ammonia that is present in the  
14 water. With information on the pH, it would be  
15 possible to get at least an idea of the infinity  
16 for the ammonia to stay in the water itself.

17 Meaning, if we find that the cooling  
18 tower is operated with lower pH's that are  
19 below for example seven or 7.5, then we would  
20 expect most or all of the ammonia in the water  
21 that is recycled to be maintained in the water  
22 itself and not be available for release to the  
23 atmosphere.

24 Q But in any event, you said, based on  
25 what you know now, you don't expect a significant

1 amount ammonia to release to the atmosphere, is  
2 that correct?

3 A That's correct.

4 Q Could you explain for the benefit of  
5 everyone what the various control measures are  
6 that Staff is requiring be applied to the cooling  
7 tower and what the purpose of those measures is?

8 A The two conditions of certification that  
9 we've recommended for the cooling tower are AQSE8  
10 and AQSE9. These are in conjunction to the  
11 requirements that the local air district has  
12 already put into place and recommended in their  
13 final determination of compliance.

14 So the two recommended staff conditions  
15 of AQSE8 and SE9 are mitigation in response to the  
16 CEQA responsibility of Staff. I'll summarize the  
17 District requirements and then go back to mention  
18 the Staff requirements. The District requirements  
19 are that the total solid content be monitored, and  
20 the PM10 emissions from the source be reduced with  
21 drift eliminators, which is a technology that was  
22 proposed by the Applicant to minimize particulate  
23 matter emissions, and that is the PM10 from drift.

24  
25 Staff also recommended some independent

1 conditions to provide a flow meter that would  
2 allow the daily flow rate of recycled water to be  
3 monitored, or recirculating water to be monitored.  
4 And we also recommended conditions that the PM10  
5 emissions be limited to approximately six tons per  
6 year through a calculation method that is based on  
7 the total dissolved solids information that the  
8 District condition requires in conjunction with  
9 the flow rate monitoring that we require.

10 We also recommend in our condition that  
11 water quality testing data show that the total  
12 dissolve solids, the ph, and the ammonia  
13 concentration of the cooling water.

14 Q Are you also requiring drift  
15 eliminators, and do they have any effect on this  
16 issue?

17 A The drift eliminators are necessary for  
18 the project to meet its anticipated PM10 emission  
19 rates to comply with the District requirements for  
20 PM10. And what we have is the requirement to  
21 maintain the drift eliminators so that the overall  
22 PM10 emission rates for the facility don't exceed  
23 the quantity that mitigation program for PM10 was  
24 designed for.

25 Q Okay. And that mitigation program

1       that's AQSC10, correct?

2           A     Correct. The PM10 mitigation program is  
3       in AQSC10, and the PM10 mitigation program  
4       includes this quantity of PM10 that is submitted  
5       by the cooling towers with the drift eliminators.

6           Q     Okay. And they're a number of 1.86  
7       million dollars are specified, was that number  
8       calculated by the Staff?

9           A     Yes, it was.

10          Q     And is that based on your informed  
11       opinion as to the amount that would be required to  
12       achieve the PM10 reductions that you were  
13       targeting to achieve here?

14          A     That's right. It was calculated by  
15       Staff. We solicited input from the Air Quality  
16       Management District on the cost effectiveness of  
17       pollution control programs. And we solicited  
18       information or input from the Air Quality  
19       Management District on the administrative cost of  
20       managing the money once it goes to the District in  
21       order to ensure that all of the reductions would  
22       be met and that the cost of administering program  
23       could be handled by the District within this same  
24       single dollar amount that is AQSC10.

25          Q     So are you confident that that amount of

1 money will achieve the emissions offsets that you  
2 were looking to achieve?

3 A Yes, I am.

4 Q Thank you. I realized I forgot to ask  
5 one question of the District, and that is have you  
6 seen AQSC10 condition regarding this 1.86 million  
7 dollar contribution in the program?

8 A Yes, we have.

9 Q Because it does require the cooperation  
10 of the District. So I wanted to ask you if the  
11 District is ready and willing to cooperate in  
12 working with the Applicant and the Staff to try to  
13 achieve those objectives?

14 A Yes, we are.

15 Q Thank you.

16 HEARING OFFICER GEFTER: Mr. Kramer, the  
17 PM10 mitigation plan, the AQSC10 that you just  
18 referred to, is part of Exhibit 56, and you failed  
19 to identify that for the record.

20 MR. KRAMER: If I did I'm sorry. I did  
21 mean to include that in all this.

22 HEARING OFFICER GEFTER: Yeah. And also  
23 57 is Mr. Layton's rebuttal testimony. So if you  
24 want to include those in your offers of Exhibits.

25 MR. KRAMER: Yes, please.

1 HEARING OFFICER GEFTER: While we  
2 pending I have a question for Mr. Birdsall. You  
3 were here when I asked the Applicant whether they  
4 were going to be -- they indicated there would be  
5 testing done to find out the amount of ammonia  
6 slip to make sure that they met the five ppm  
7 limit.

8 And I guess it was Mr. Rowley, he  
9 indicated there is a condition that requires  
10 testing. Can you identify that condition for us?

11 MR. BIRDSALL: One moment and then I  
12 will.

13 HEARING OFFICER GEFTER: Okay. And is  
14 that r elated at all to the AQSC8 and 9 that you  
15 referred to?

16 MR. BIRDSALL: Well, I can answer that  
17 that right away, and that condition to monitor the  
18 ammonia slip from the combustion sources is not  
19 related --

20 HEARING OFFICER GEFTER: That's  
21 separate.

22 MR. BIRDSALL: -- to AQSC8 and SC9.

23 HEARING OFFICER GEFTER: Okay.

24 MR. BIRDSALL: Which address the cooling  
25 tower operation.

1 HEARING OFFICER GEFTER: All right.

2 MR. KRAMER: Just to note, I'm completed  
3 with my direct. I will have one cross question  
4 for the applicant --

5 HEARING OFFICER GEFTER: Okay.

6 MR. KRAMER: -- when the time comes.

7 HEARING OFFICER GEFTER: And is  
8 Mr. Layton going to present direct testimony or  
9 are you going to wait for rebuttal?

10 MR. KRAMER: He's here to respond to  
11 questions about the rebuttal testimony.

12 HEARING OFFICER GEFTER: All right.

13 MR. KRAMER: We may not need to go over  
14 it orally.

15 HEARING OFFICER GEFTER: Okay. When you  
16 find it just let me know which condition it is.

17 MR. BIRDSALL: I'm sorry, the Staff did  
18 write their own condition and I was looking in the  
19 District's conditions for monitoring ammonia slip.  
20 But is also a component of the Staff's condition  
21 AQSC11.

22 HEARING OFFICER GEFTER: Okay.

23 MR. BIRDSALL: I wrote that. I should  
24 know that.

25 HEARING OFFICER GEFTER: Okay. All



1 right. And AQSC11 limits the amount of ammonia  
2 from the turbine, from the turbine exhaust stack,  
3 right?

4 MR. BIRDSALL: Correct. That is the  
5 condition that addresses --

6 HEARING OFFICER GEFTER: Okay.

7 MR. BIRDSALL: -- the combustion of  
8 sources of ammonia.

9 HEARING OFFICER GEFTER: All right.  
10 Great. And then there's also indicated the Air  
11 District has proposed a condition -- or has a  
12 condition which would reduce PM10 emissions from  
13 cooling tower drip. Now, is that an Air District  
14 condition or is that a Staff condition?

15 MR. BIRDSALL: Staff condition AQSC9 --

16 HEARING OFFICER GEFTER: Okay.

17 MR. BIRDSALL: -- is the condition that  
18 requires PM10 be reduced to under six tons per  
19 years.

20 HEARING OFFICER GEFTER: Okay.

21 MR. BIRDSALL: And the drift eliminator  
22 is key to achieving that.

23 HEARING OFFICER GEFTER: Okay. And the  
24 drift eliminator is which condition? Is that in  
25 the condition? Typically it is I thought.

1 MR. BIRDSALL: I'm looking. I'm not  
2 certain that it is a condition.

3 HEARING OFFICER GEFTER: Okay.

4 MR. BIRDSALL: As it is part of the  
5 project description.

6 HEARING OFFICER GEFTER: All right. I'd  
7 like to see that as a condition too. We can do  
8 that, you know, before the record closes. It  
9 seemed I heard one of the witnesses testifying  
10 that there's an Air District requirement to reduce  
11 PM10 emissions from cooling power drift, but that  
12 would be a Staff condition?

13 MR. BIRDSALL: That's correct.

14 HEARING OFFICER GEFTER: All right.

15 MR. BIRDSALL: That would be a staff  
16 condition and that's an important clarification.  
17 Thank you for bringing that up.

18 HEARING OFFICER GEFTER: All right. And  
19 that is because the (inaudible) does not consider  
20 the cooling tower as part of the analysis for your  
21 purposes. I'm going to ask I guess Mr. Lake to  
22 address the role of the Air District. These were  
23 be the cooling tower emissions.

24 MR. LAKE: Well, as has been mentioned  
25 in previous documents that Air District does not

1 require permits for cooling towers.

2 HEARING OFFICER GEFTER: Okay.

3 MR. LAKE: And, therefore, we do not  
4 have the authority to require best available  
5 control technology for the cooling towers.  
6 However, as part of the project we looked at the  
7 potential air quality impacts, both in terms of  
8 PM10 and also from cooling tower emissions.

9 HEARING OFFICER GEFTER: Okay.  
10 Mr. Kramer, you had a question for the Air  
11 District.

12 MR. KRAMER: No, actually, I took care  
13 of that one. So we're waiting for cross  
14 examination.

15 HEARING OFFICER GEFTER: Okay. So  
16 you're available for cross examination. Okay.  
17 Okay. Mr. Briggs, are you ready to cross examine  
18 the witnesses? And we have kind of a limited time  
19 this evening, so I hope that your questions will  
20 be relevant and to the point.

21 MR. BRIGGS: Yes, I do too.

22 CROSS EXAMINATION

23 BY MR. BRIGGS:

24 Q MR. Birdsell, when you looked at  
25 the level of significance for secondary PM10

1 emissions, what emissions rate did you assume were  
2 ammonia?

3 A The ammonia from the cooling tower?

4 Q Yes, sorry, from the cooling tower.

5 A The emission rate that we -- well, we  
6 haven't settled on an emission rate for the  
7 cooling tower. From Staff's perspective we have  
8 arrange of variables that we are not confident in  
9 using to create an estimate of ammonia from the  
10 cooling tower.

11 I have reviewed the Applicant's  
12 estimates for emission of ammonia from the cooling  
13 tower and I've reviewed Mr. Powers' and the  
14 Intervenor's estimates. And I can't endorse  
15 either emission rate or either range of emission  
16 rates. And the rates range from somewhere around  
17 seven tons per year up to about 70.

18 So there's an order of magnitude in the  
19 ranges. I can't endorse either of these because I  
20 don't have information on the likely operating  
21 conditions of the cooling tower, namely some of  
22 these things that we've recommended monitoring  
23 like ph and the ammonia content of the water  
24 itself.

25 Q Was there a range that you assumed then?

1 I mean perhaps a low number and a high number?  
2 Can you just give me some sense what emissions  
3 rate you were looking at when you did this  
4 determination?

5 A Well, I'm saying, or I'm summarizing,  
6 the emission rates that have been presented thus  
7 far. And I've said that there's an order of  
8 magnitude between the lower and the upper ends.  
9 And I also believe that if ph is managed to a  
10 level of less than, for example, 7.5 that the  
11 ammonia emission rates could be zero.

12 So essentially, I have the selection of  
13 the emission rates from zero to about 70 times per  
14 year, which has made it difficult for staff to  
15 endorse one emission rate.

16 MR. BRIGGS: Ms. Head, I just want to  
17 clarify something that you said earlier, did I  
18 hear you correctly when you said that you used the  
19 same model, and I'm not sure which model you were  
20 talking about, when you looked at Palomar --  
21 sorry. Let me correct this.

22 You said you used a model from Otay  
23 Mesa, a similar model from Otay Mesa, also in your  
24 Palomar analysis. Can you clarify what model you  
25 were talking about?

1 MS. HEAD: Sure, it goes actually to the  
2 models that Howard Balentine described that we use  
3 the ISE as well as the air mod model for the  
4 dispersion aspects, and those are EPA models. So  
5 we just use the same EPA models as were used for  
6 the other project.

7 MR. BRIGGS: And did those models take  
8 into account (indiscernible) factors?

9 MS. HEAD: Yes, they do. They are run  
10 on the meteorological data set in this case three  
11 years.

12 MR. BIRDSALL: Three years.

13 MS. HEAD: Three years, as Mr. DeSiena  
14 described of local wind speed action as well as  
15 the Miramar air data.

16 MR. BRIGGS: And the data set was the  
17 same for Palomar as it was for Otay Mesa?

18 MS. HEAD: No, no, no. It was --

19 MR. BRIGGS: Just the model was?

20 MS. HEAD: The model was the same. Otay  
21 Mesa used local meteorology, we use Escondido.

22 MR. BRIGGS: Is Dr. Heisler still  
23 available?

24 BY MR. BRIGGS:

25 Q Dr. Heisler, I'd like to ask you about

1 your rebuttal testimony if I could please. You  
2 assume that San Diego County is ammonia limited,  
3 correct?

4 A I assume that emissions will be --  
5 excuse me, the concentration will be proportional  
6 to the emission rate. If the area were ammonia  
7 rich there could be a large increase in emissions  
8 with no change in concentration of ammonia and  
9 nitrate.

10 Q I'm no chemist, so help me out here. Is  
11 one unit of ammonia weigh the same or have the  
12 same mass as a unit of ammonium nitrate?

13 A No, it doesn't, because of the  
14 difference in molecular weights you're going to  
15 form I think it's about 4.7 times as much ammonia  
16 nitrate when it reacts with the nitrate acid  
17 that's already in the air. So you do have that  
18 increase.

19 Again, we also address sulphur dioxide,  
20 which has a factor I believe of over two in  
21 increase. And we looked at both of them together.  
22 So they both they have an increase. And so we are  
23 over -- I shouldn't say over, mitigating, we're  
24 mitigating a full 33 tons per year sulphur dioxide  
25 effectively.

1 But since that doesn't all convert, even  
2 with the weight difference between the two, it's  
3 still well within the amount of mitigation. It's  
4 covered in the funding.

5 Q Can I ask you to take a look at your  
6 table AQB2 for a minute please.

7 HEARING OFFICER GEFTER: Where is that  
8 table?

9 MR. BRIGGS: I'm sorry, in the rebuttal  
10 testimony for Dr. Heisler, page eight, table AQB2,  
11 page eight.

12 DR. HEISLER: AQB2, yes.

13 BY MR. BRIGGS:

14 Q So if I heard you correctly one unit of  
15 ammonia has a lower mass than a unit of ammonium  
16 nitrate?

17 A That's correct.

18 Q In the footnote A it says ammonia  
19 emissions conservatively estimated to be 113 tons  
20 per year from combustion turbine, and 37.5 tons  
21 per year from the cooling tower. That is up to  
22 150.5 tons per year for ammonia, correct?

23 A That's correct.

24 Q The table says that the project annual  
25 emissions for ammonium nitrate is also 150.5 tons



1 per year.

2 A The heading is not quite labeled  
3 correctly. That's project annual emissions of the  
4 precursor, either ammonia in the case of the first  
5 row, or sulphur dioxide in the case of the second  
6 row.

7 Q So what would the annual emissions rate  
8 be for the ammonium nitrate?

9 A There wouldn't be any emitted directly.  
10 It would have to react with nitrate acid in the  
11 atmosphere to form ammonium nitrate.

12 Q And so when that reaction takes place  
13 how much ammonium nitrate are you going to have in  
14 the atmosphere?

15 A Well, based on this estimate we're  
16 getting -- are you asking in terms of ambient  
17 concentration or an amount that actually we think  
18 might react?

19 Q Why don't you tell both.

20 A As it shows in the first row of the  
21 table for ammonium nitrate in the far right hand  
22 column, the estimated annual average concentration  
23 would be one quarter of a microgram per cubic  
24 meter, again using conservative assumptions. And  
25 if you look on table AQB3 in the second column,

1 the one labeled ammonia at the bottom, that would  
2 effectively account for about six percent or less  
3 than six percent of the ammonia being converted.

4 Q Okay. I'm actually curious why they  
5 were using a model in table AQB3. And there's an  
6 assumption that was made earlier. Let me see if I  
7 can find it. They say the assumption that changes  
8 in particular to ammonium nitrate concentrations  
9 on proportional to changes in ammonia emissions  
10 assumes that the San Diego area is ammonia  
11 limited. That's on page four.

12 A Right.

13 Q So if you make that assumption why the  
14 model? I mean wouldn't the math just be straight  
15 once you've made that assumption?

16 A No, not necessarily. Ammonia limited  
17 doesn't necessarily mean that it all converts to  
18 ammonium nitrate. The procedure that was used was  
19 basically a two step procedure making the  
20 assumption of proportionality, meaning that if you  
21 get a ten percent increase in ammonia emissions  
22 you get a ten percent increase in ammonium  
23 nitrate.

24 We started with that basic assumption.

25 We looked at within San Diego County measured

1 ammonium nitrate concentrations from I believe it  
2 was four different locations with different time  
3 periods of covered. The highest annual average,  
4 it was actually measure nitrate.

5 We scaled it up to account for the  
6 ammonia that makes the ammonium nitrate. It was  
7 about 7.3 micrograms per cubic meter. This is in  
8 table AQ-B1 on page six of the rebuttal testimony.  
9 We also got an estimate of the county wide annual  
10 ammonia emissions in tons per year.

11 And this was from an inventory develop  
12 for the western regional air partnership, which is  
13 the western regional planning organization for air  
14 quality issues, primarily regional As. We then  
15 divided the concentration by the emissions to find  
16 out how many micrograms per cubic meter we'd get  
17 per ton per year of ammonia emitted.

18 So that gives us our proportionality.  
19 We then applied that micrograms per cubic meter  
20 per ton per year, multiplied that by the project  
21 annual ammonia emissions to calculate this annual  
22 average ambient concentration of a quarter of a  
23 microgram per cubic meter.

24 Now, to find out how much of that  
25 ammonia conversion, what percentage that

1 represented, we went back and actually did air  
2 quality modeling using the ammonia emissions to  
3 calculate maximum ground level ammonia  
4 concentration.

5 So we then said, okay, if all that got  
6 converted how much of ammonium nitrate would that  
7 give us? That's that maximum ammonia  
8 concentration of micrograms per cubic meter times  
9 4.7 to account for the weight difference. We then  
10 looked at what that value would be, and that one,  
11 if you look at table AQ-B3 in the column labeled  
12 ammonia in the second row, it would be 4.2  
13 micrograms per cubic meter.

14 That's if it all converted. But we're  
15 only expecting to get at most a quarter of a  
16 microgram per cubic meter, which is only six  
17 percent of that value.

18 Q I'm curious about the basis for the  
19 model that you used in light of the second  
20 sentence of your rebuttal testimony, which  
21 Commission Staff at the Palomar Energy -- sorry,  
22 Commission Staff have noted that there are no  
23 agency recommended models or procedures for  
24 estimating nitrate or sulphite formation as a  
25 result of sulphur dioxide or NH3 emissions.

1           So where does this model come from that  
2   you were using then?

3           A     Are you referring to the air quality  
4   modeling that was done to estimate ammonia  
5   concentrations?

6           Q     It's possible that I'm confused.  So if  
7   I --

8           A     Okay.  There are no agency approved  
9   procedures to estimate the conversion part of it.  
10   So to get the best estimate that we could, a  
11   conservative estimate and response to the request,  
12   we use the approach that I discussed about looking  
13   at the area white ammonia concentrations, and the  
14   county wide emissions.  I get that ratio.

15           The other part of the modeling that was  
16   done was not to model conversion.  It was to model  
17   dispersion of ammonia emissions.

18           MR. BRIGGS:  Okay.  I have nothing  
19   further.

20           HEARING OFFICER GEFTER:  Okay.  Okay.  
21   You don't have any questions for the Air District  
22   representatives?

23           MR. BRIGGS:  No.

24           HEARING OFFICER GEFTER:  Okay.  Okay.  
25   Before we hear your -- Mr. Kramer, do you have a

1 question?

2 MR. KRAMER: Yes. It has to do with the  
3 new offset that the Applicant has identified for  
4 the District if there's a problem with the one  
5 that you said approximately one ton offset that  
6 was actual, now that has come into question. I've  
7 looked at Exhibit 34, which is the letter telling  
8 the District that they've identified, the  
9 Applicants identified, another 15.3 tons of NOx.

10 It does identify that it's all I guess  
11 from a company called Naverus Inc. But I wanted  
12 to find out if the Applicant could provide  
13 additional information about that because it would  
14 appear that this will need to be built into the  
15 condition of approval that has a table of all the  
16 ERC's that are to be surrendered.

17 I'm willing to take care of this in the  
18 briefs if necessary.

19 HEARING OFFICER GEFTER: Okay.

20 MR. KRAMER: But I wanted to just  
21 highlight the issue.

22 HEARING OFFICER GEFTER: AQSC5, in fact,  
23 that was one of my questions as well. So I'm glad  
24 you brought that up, Mr. Kramer. You know, the  
25 proposed AQSC5, one of Staff's proposed conditions

1 lists the ERC's that the Applicant intends to  
2 provide to be in compliance with the one stack and  
3 the FDOC.

4 And Exhibit 34 indicates I think it's 15  
5 times per year from Naverus for NOx. And whether  
6 particularly that one should be included in this  
7 proposed condition. I'll ask, Mr. Speer, do you  
8 know?

9 MR. SPEER: I think this is in response  
10 to a letter that Mike Lake included an indication  
11 that there was a shortage of emission reduction  
12 credits exhibited. The shortage was rather small.  
13 It was .76 tons. So here the Applicant is  
14 indicating they have contracted for another 15.3  
15 tons from Naverus.

16 The District has not had an opportunity  
17 to confirm yet. The application for banking for  
18 most of these apparently have been submitted to  
19 the District. And we will need to confirm how  
20 much that in reality will result after we've  
21 processed those banking applications.

22 HEARING OFFICER GEFTER: All right. So  
23 what we're looking at now is we need to possibly  
24 revise AQSC5 before we close the record. We also  
25 need a new condition, a new proposed condition, on

1 cooling tower drift, which would limit cooling  
2 tower drift to .005 percent, which is, as we've  
3 discussed earlier, part of the project  
4 description.

5 And the Applicant has put that into  
6 testimony, but we need a condition to ensure that  
7 that in fact occurs. So Staff could draft that  
8 too. So the record will remain open for that as  
9 well. Another question real quickly about the  
10 PM10 mitigation plan, which is included in Exhibit  
11 56, which actually is the condition that  
12 identifies the plan.

13 Members of the public were in here  
14 earlier today and they were requesting that the  
15 PM10 mitigation plan identify local measures in  
16 Escondido to deal with PM10. And I'm wondering if  
17 the District has any plans to work locally with  
18 the community to implement some of the programs  
19 that will be funded in the PM10 mitigation plan?

20 MR. LAKE: Well, I believe we have  
21 discussions ongoing with the City of Escondido,  
22 also the transient district, north county  
23 transient district, and also the Escondido School  
24 District with regard to school buses. And one of  
25 the requirements of the mitigation plan is that,



1 at least for the first two years following funding  
2 of the mitigation plan, priority has to be given  
3 to project that operate directly in Escondido.

4 HEARING OFFICER GEFTER: Okay.

5 MR. LAKE: And thereafter, if not  
6 sufficient projects are found in the immediate  
7 vicinity of Escondido, then in north county.

8 HEARING OFFICER GEFTER: Okay. And  
9 that's language that's included in the proposed  
10 condition?

11 MR. BIRDSALL: Correct. That's in  
12 AQSC10.

13 HEARING OFFICER GEFTER: Thank you.  
14 Okay. Do you have any more questions for the  
15 representatives from the Air District?

16 MR. BRIGGS: No.

17 HEARING OFFICER GEFTER: Okay. Then are  
18 there going to be any questions for the Air  
19 District with respect to public health, because  
20 that's our next topic? And if they don't need to  
21 stay here we'd like to release them.

22 MR. BRIGGS: We won't have any questions  
23 for them on that topic.

24 HEARING OFFICER GEFTER: Okay.

25 MR. KRAMER: None from us.

1 HEARING OFFICER GEFTER: Okay.

2 PRESIDING MEMBER GEESMAN: I want to  
3 thank you guys for staying with us.

4 HEARING OFFICER GEFTER: Thank you very  
5 much. Off the record.

6 (Off the record.)

7 HEARING OFFICER GEFTER: Okay. Back on  
8 the record. Mr. Miller indicates he has one  
9 question on public health for the representatives  
10 from the Air District. And we're going to allow  
11 that question right now so that they can leave.

12 MR. MILLER: Thank you. I believe  
13 you're aware that Mr. Balentine submitted, as part  
14 of his public health testimony, a revised health  
15 risk assessment to take account of additional  
16 ammonia emissions from the cooling tower that  
17 Mr. Powers had requested.

18 And I would just like to ask you if that  
19 had been reviewed and you found that was an  
20 acceptable analysis?

21 MR. SPEER: Can you state that again  
22 please?

23 MR. MILLER: I'm sorry.

24 MR. SPEER: Sorry.

25 MR. MILLER: The question was that were

1       you aware that, I think you were, that Mr.  
2       Balentine submitted, as part of his public health  
3       testimony, a revised health risk assessment, which  
4       included -- which was based upon the previous  
5       health risk assessment, but did include additional  
6       ammonia emissions from the cooling tower, and took  
7       count of the reduced ammonia emissions from the  
8       stack?

9               And if that's the case, if you could  
10       comment on the acceptability of that analysis.

11              MR. SPEER:   The District did accept that  
12       report, yes.

13              HEARING OFFICER GEFTER:   Okay.   And,  
14       Mr. Miller, would you please identify where in the  
15       record that testimony exists?

16              MR. MILLER:   That will be part of  
17       Exhibit 35.   It would be Mr. Balentine's testimony  
18       on public health.   That's what I was referencing.

19              HEARING OFFICER GEFTER:   Okay.   Thank  
20       you.   Do you have any cross examination?

21              MR. BRIGGS:   We don't.

22              HEARING OFFICER GEFTER:   All right.

23              MR. KRAMER:   No.

24              HEARING OFFICER GEFTER:   Mr. Kramer?  
25       No.   Okay.   Thank you.   Off the record.

1 (Off the record.)

2 HEARING OFFICER GEFTER: The reporter  
3 has sworn Dr. Khandan in, and he will testifying  
4 for Mr. Powers.  
5 Thereupon,

6 DR. NIRMALA KHANDAN  
7 was called as a witness herein and, after having  
8 first been duly sworn, was examined and testified  
9 as follows:

10 DIRECT EXAMINATION

11 BY MR. BRIGGS:

12 Q Dr. Khandan, can you please state your  
13 full name for the record.

14 A Yes. My name is Nirmala Khandan,  
15 K-H-A-N-D-A-N.

16 Q And can you just spell your first name  
17 for us?

18 A N-I-R-M-A-L-A.

19 Q Are you currently employed?

20 A Yes, I'm a professor at New Mexico  
21 University.

22 Q And can you briefly describe your  
23 professional training in education?

24 A Bachelor's degree was in mechanical  
25 engineering, and I have Masters and Ph.D. involved

1 in research on stripping mass transfer,  
2 (indiscernible), etcetera.

3 Q And you were asked in this case to  
4 review calculations to determine the ammonia  
5 stripping rate from the cooling tower, is that  
6 correct?

7 A That's correct.

8 Q Can you share your impressions from that  
9 review please?

10 A Yes, I reviewed the calculations done by  
11 carbon air on stripping of ammonia from back  
12 towers. And looking over the calculations I  
13 checked the mass (indiscernible), and they were  
14 okay. So I believe that was the only way I could  
15 check those calculations.

16 Q So you verified that the calculation  
17 procedure that they were using was correct?

18 A That's correct.

19 Q Were you able to verify the stripping  
20 rate percentage?

21 A No, I was not. The stripping rate was  
22 one of the parameters, and I specifically  
23 investigated or did some sensitivity analysis  
24 studying the effect of ph and stripping rate to  
25 calculate or to (indiscernible) the emission rate.

1           MR. BRIGGS: We'll turn it over for  
2 cross examine. We're finished at this point.

3           HEARING OFFICER GEFTER: Okay. Okay.  
4 Do you have cross examination, Mr. Miller?

5           MR. MILLER: Briefly. Maybe I could ask  
6 counsel a question that would then lay a  
7 foundation for my question. Are you still relying  
8 upon Dr. Khandan's mimeograph that was identified  
9 as an exhibit?

10          MR. BRIGGS: Yes, that's correct.

11          MR. MILLER: Okay.

12          HEARING OFFICER GEFTER: Let's identify  
13 that for the record.

14          MR. BRIGGS: I actually don't have that  
15 in front of me.

16          HEARING OFFICER GEFTER: It's Exhibit  
17 110.

18          MR. BRIGGS: In the interest of time  
19 I'll take your word for it, Exhibit 110.

20          HEARING OFFICER GEFTER: It is.

21          MR. MILLER: Do you have it handy to  
22 refer to?

23          MR. BRIGGS: Yes, we have it. Thank  
24 you.

25                   CROSS EXAMINATION

1 BY MR. MILLER:

2 Q The statement, if I could read it. It  
3 says, "Please note that this milograph, this is in  
4 capital letters at the bottom of the first page,  
5 to be used only under the above designed  
6 conditions, i.e. different myelographies have to  
7 be generated for different design conditions."

8 I take it from that that in the event  
9 that different design and parameters were used for  
10 the Palomar project that the milograph would  
11 change?

12 A That's true, such as water rate and so  
13 on.

14 Q Right. That's really all I need to ask.  
15 I have no further questions.

16 HEARING OFFICER GEFTER: Okay.

17 MR. BRIGGS: No questions.

18 HEARING OFFICER GEFTER: Okay.

19 Dr. Khandan.

20 DR. KHANDAN: Thank you.

21 HEARING OFFICER GEFTER: Thank you very  
22 much. And we actually have time for Mr. Powers'  
23 direct testimony.

24 MR. BRIGGS: Without discouraging my  
25 client in public it's going to take longer than

1 four minutes. Do we want to get started?

2 HEARING OFFICER GEFTER: Okay. We'll go  
3 off the record and talk about it.

4 (Off the record.)

5 REDIRECT EXAMINATION

6 BY MR. BRIGGS:

7 Q Dr. Powers, you reviewed applicants in  
8 CEC staff -- I'm sorry I said Dr. I meant Mr.  
9 Mr. Powers have you reviewed applicants in CEC  
10 staff figures on ammonia emissions?

11 A Yes, I have.

12 Q What did you conclude from your review?

13 A The first comment that I have is that I  
14 think the comment that the CEC staff makes that  
15 because we are in a dry and mild climate they  
16 would not anticipate secondary ammonia nitrate,  
17 secondary ammonia nitrate or ammonium sulphate  
18 formation.

19 And I just want to point out that the  
20 primary driver is the relative ratio of ammonia to  
21 nitrate to sulphur oxide in the atmosphere. And  
22 the temperature and humidity are lesser factors in  
23 that equation. And I just want to point out that  
24 that is a some facile statement to make about the  
25 fait of the -- or the concentration and formation.



1           The other comment that I have -- is it  
2   appropriate now to talk? Okay. I do want to  
3   address Dr. Heisler's analysis of secondary  
4   particulate formation. And I think that the  
5   original assumption that is made that we're  
6   assuming it's an ammonia limited environment. I  
7   accept that.

8           Once you make the assumption that it's  
9   an ammonia limited environment, meaning we have  
10   less concentration of ammonia in the atmosphere  
11   than nitrate or SO<sub>2</sub>, the molecular calculation is  
12   simple, you're simply assuming that that binds  
13   with the nitrate and the sulphate in the  
14   atmosphere, and becomes ammonia nitrate and  
15   ammonium sulphate.

16           That it all goes in that reaction. When  
17   you do that you get over 700 tons of secondary  
18   PM<sub>10</sub>. And I want to just read a couple of  
19   statements from your testimony because I am  
20   interested. I do read all of this again and  
21   again. And I don't quite follow it.

22           And the first statement is made, "This  
23   approach is based on the assumption that the  
24   formation of secondary constituents is directly  
25   proportional to precursor emissions." The next

1 sentence, "However, secondary ammonium nitrate  
2 formation may not be directly proportional to  
3 ammonia emissions."

4 That is a correct statement. And then  
5 you go into to cite Dr. Wattson and his work. At  
6 the end of that paragraph you note, "If existing  
7 total ammonia levels are low, which is the case in  
8 the extreme left hand side of the figure, termed  
9 ammonia limited conditions, particulate ammonia  
10 nitrate concentrations will be approximately  
11 proportional to changes in total ammonia."

12 Accepted.

13 Next paragraph, "Nevertheless, the  
14 current analysis follows a worst case assumption  
15 that the area is in fact ammonia limited in order  
16 to proceed with analysis of worst case, secondary  
17 PM impacts." So we're looking at a worst case  
18 situation, which I accept.

19 Then on page seven under fraction of  
20 ammonia sulphur dioxide emissions converted --  
21 excuse me, the paragraph above, "Again, we repeat,  
22 initially the analysis for ammonia nitrate  
23 formation assumes that the project area is ammonia  
24 limited."

25 Next paragraph, "The fractions of SO2

1 and ammonia emissions that are converted to  
2 secondary PM10 were estimated by first calculating  
3 the concentrations that would result if the  
4 emissions were completely converted." I did not  
5 see that in the text. I didn't see my 700 tons of  
6 final product.

7 And then the statement is made, "This  
8 was accomplished by using air quality dispersion  
9 modeling to estimate the maximum ground level SO2  
10 concentrations, etcetera, etcetera." That is  
11 where you lost me. We go from a simple "we are  
12 ammonia limited. We are converting all of this",  
13 to secondary PM, to now looking at a model.

14 And assuming through that model for some  
15 reason it isn't ammonia limited and that we're  
16 only going to convert a very small part of it.  
17 Again, my calculations indicate that we're at 700  
18 tons or more.

19 Q Mr. Powers, did you do anything to  
20 corroborate your calculations?

21 A I did. I took this analysis and I sent  
22 it to Dr. Bill Stockwell, who's the author of  
23 Exhibit 101, which is the basis for the analysis  
24 really of this conversion of ammonia to secondary,  
25 ammonia nitrate.

1 Q And what did Dr. Stockwell conclude?

2 MR. MILLER: I'm going to have to object  
3 at this point. We have another instance where we  
4 have after the fact conversations with people that  
5 are not here that we have no idea what they were  
6 actually asked and reported in testimony. So I  
7 have to object to that.

8 MR. BRIGGS: If the objection is to the  
9 timing of this information, I would point out that  
10 it's in response to Dr. Heisler's -- I'm sorry.  
11 It's Dr. Heisler's rebuttal testimony. Secondly,  
12 if the objection is to hearsay, we're not offering  
13 it by itself.

14 We're simply offering it to help explain  
15 and supplement what Dr. Powers has testified that  
16 he did. That is a permissive use of hearsay under  
17 the CEC's rules.

18 HEARING OFFICER GEFTER: It's kind of an  
19 attenuated use of hearsay because I would  
20 definitely sustain the objection on the hearsay  
21 ground.

22 MR. BRIGGS: We don't dispute that it's  
23 hearsay. We simply --

24 HEARING OFFICER GEFTER: And I think  
25 that to the extent that Mr. Powers will testify

1       that that's the basis on which he made his own  
2       calculations, it's not worth much weigh in any  
3       event because Mr. Powers is presenting the  
4       calculations that he actually made.

5               MR. BRIGGS: That's correct.

6               HEARING OFFICER GEFTER: So you may do  
7       that, but you don't need to go into what  
8       Mr. Stockwell told you, you know.

9               MR. BRIGGS: That's fine.

10              HEARING OFFICER GEFTER: Or information  
11       that you discussed with him.

12       BY MR. BRIGGS:

13              Q       So the number that you came up with was  
14       what for total secondary PM10 emissions?

15              A       I did a simplified analysis and just  
16       assumed it all went to secondary ammonium nitrate.  
17       And Dr. Stockwell actually refined it, came up  
18       with 736 tons of mix of secondary ammonium nitrate  
19       and ammonium sulphate.

20              HEARING OFFICER GEFTER: Okay.

21       Mr. Powers, where are your calculations? Where  
22       are your calculations in the record? Are you just  
23       testifying to them right now?

24              MR. BRIGGS: He's testifying to them  
25       right now. They weren't submitted.

1 HEARING OFFICER GEFTER: All right.

2 MR. POWERS: Right. I'm testifying to  
3 that now.

4 HEARING OFFICER GEFTER: Okay.

5 MR. MILLER: Excuse me, but Mr. Powers'  
6 direct testimony does include a table with  
7 estimates. These are new numbers. The previous  
8 estimates are on the table in his direct testimony  
9 that ranged from 40 to 74 tons or thereabouts I  
10 believe. And that was based upon the mimeograph  
11 that was just introduced by Professor Khandan.

12 HEARING OFFICER GEFTER: Are you  
13 revising your calculations, Mr. Powers?

14 MR. POWERS: No, I'm not. I'm simply  
15 commenting on the analysis that was prepared by  
16 Dr. Heisler where he assumes an ammonia limited  
17 situation using 150 tons of available ammonia is  
18 very -- just to put it in context, when we do  
19 calculations of mass emissions of nitrogen oxides  
20 we always assume that NO converts to NO2 in the  
21 atmosphere, which increases its weight by 50  
22 percent.

23 This is exactly an analogous to that  
24 where ammonia binds in the atmosphere to form a  
25 heavier compound. It's very straightforward

1 stuff. For this analysis, looking at an  
2 admittedly hypothetical situation where you are  
3 assuming that all of this ammonia is converted in  
4 the atmosphere.

5 BY MR. BRIGGS:

6 Q You went back and looked at these  
7 numbers in response to Dr. Heisler's rebuttal  
8 testimony, is that right?

9 A Correct. This is a response to the  
10 rebuttal testimony.

11 HEARING OFFICER GEFTER: Okay.  
12 Essentially you're disagreeing with Dr. Heisler  
13 analysis?

14 MR. POWERS: Well, what I'm pointing out  
15 -- that is correct. What I'm pointing out is that  
16 Dr. Heisler makes a very easy to follow assumption  
17 that we're in an ammonia limited environment.  
18 This much ammonia is available. But instead of  
19 taking the obvious step, which is running the  
20 numbers, he then goes off on a modeling tangent,  
21 which I had a great deal of difficulty following.

22 And the second sentence of his testimony  
23 is there's no certified modeling. We're basically  
24 running with this trying to come up with  
25 something. My impression is it's much better to

1 simply stick with your simple set of assumptions.  
2 It's ammonia limited. You're converting. You  
3 have a lot of potential PM10, period.

4 And if you want to refine it and say  
5 that it's not ammonia limited that's fine.

6 HEARING OFFICER GEFTER: Well, what is  
7 your testimony? What are you suggesting should be  
8 the way it should be calculated?

9 MR. POWERS: What I'm suggesting is to  
10 stop before the modeling. Simply, if you're  
11 assuming ammonia limited you've got 150 tons plus  
12 of ammonia, you have the potential to emit over  
13 700 tons. And what we have is --

14 HEARING OFFICER GEFTER: Is that not  
15 speculative?

16 MR. POWERS: Well, it's a projection,  
17 but at the same time what I'm saying is I cannot  
18 follow the modeling that has been provided. I  
19 mean I'm reading it again and again. I simply  
20 can't follow how we went from an ammonia limited  
21 situation with potential for 700 tons to only six  
22 percent of that now being available.

23 HEARING OFFICER GEFTER: And why don't  
24 you understand that? What is it that you don't  
25 understand?



1 BY MR. BRIGGS:

2 Q Let me see if I can ask a question to  
3 clarify this. Mr. Powers, when you look at the  
4 starting assumptions that Dr. Heisler uses, and  
5 you follow those to their logical conclusion, you  
6 then get to the model that gives some different  
7 numbers.

8 A Correct.

9 Q All right. When you follow the initial  
10 assumptions, what number do you come up with for  
11 the total secondary PM10 emissions?

12 A Over 700 tons a year.

13 MR. BRIGGS: That answers the question.

14 HEARING OFFICER GEFTER: So you'll move  
15 on to another topic now.

16 MR. BRIGGS: Yes. We are done.

17 HEARING OFFICER GEFTER: That's it?  
18 That's your total testimony on air quality?

19 MR. BRIGGS: Yes, that's our total  
20 direct.

21 HEARING OFFICER GEFTER: Okay.  
22 Mr. Miller, do you have any questions of the  
23 witness?

24 MR. MILLER: No, I don't think I do. I  
25 would like to offer Dr. Heisler's rebuttal.

1 HEARING OFFICER GEFTER: Rebuttal, let's  
2 go through and do some cross examination.  
3 Mr. Blaising, you have questions related to the  
4 City of Escondido?

5 MR. BLAISING: Yes.

6 HEARING OFFICER GEFTER: Okay. Give it  
7 a try.

8 CROSS EXAMINATION

9 BY MR. BLAISING:

10 Q Mr. Powers, on page seven of your direct  
11 testimony you state that the HARF will producing  
12 reclaimed water that violates the maximum ammonia  
13 discharge. Also, on page ten you refer to these  
14 as the ammonia limit lures violations.

15 MR. BRIGGS: Can you say those page  
16 numbers again please?

17 MR. BLAISING: Certainly, page seven of  
18 the direct testimony, and as well page ten of  
19 Mr. Powers' direct testimony.

20 MR. BRIGGS: Where on page seven are you  
21 looking, Mr. Blaising?

22 MR. BLAISING: I believe that's the  
23 first full paragraph.

24 MR. BRIGGS: Okay. Thank you. What was  
25 your question again?

1 BY MR. BLAISING:

2 Q Mr. Powers, you signed as authority for  
3 these statements, the MPDES permit. I believe  
4 it's been introduced as Exhibit 76. What agency  
5 issued this permit, Mr. Powers?

6 A Could you speak into the microphone a  
7 little better?

8 Q Sure.

9 A It's difficult for me to hear your  
10 statements.

11 Q We introduced into the record Exhibit  
12 76, which is that MPDES permit that I believe you  
13 referenced as the authority for these statements.  
14 I'm asking what agency issued this permit.

15 MR. BRIGGS: I'm going to object. The  
16 permit speaks for itself. Right on the face it  
17 tells you who issued it.

18 BY MR. BLAISING:

19 Q Very good. Mr. Powers, to your  
20 knowledge has the issuing agency for this permit  
21 ever found that Escondido is in violation of this  
22 permit on the basis that ammonia content that  
23 recycled water is above 25 milligrams per liter?

24 MR. BRIGGS: Objection again. This is a  
25 question for the agency, not for Mr. Powers. He

1 doesn't regulate Escondido.

2 MR. BLAISING: Very good. I would move  
3 to strike the reference, the statement, to it  
4 being a violation. Is that acceptable?

5 HEARING OFFICER GEFTER: There's been  
6 evidence presented that in fact it is a violation.

7 MR. BRIGGS: We can't hear you.

8 HEARING OFFICER GEFTER: There's been no  
9 evidence presented to show that it's a violation.  
10 And it's also not relevant to this proceeding.  
11 And so, therefore, that testimony will be stricken  
12 with respect to the HARF violating its permit  
13 regarding ammonia content.

14 MR. BRIGGS: That's fine.

15 MR. BLAISING: That's all the questions  
16 I have. Thank you.

17 HEARING OFFICER GEFTER: Mr. Kramer, do  
18 you have any questions of the witness?

19 MR. KRAMER: No.

20 HEARING OFFICER GEFTER: All right.

21 PRESIDING MEMBER GEESMAN: Mr. Powers, I  
22 just want to be clear that I understand this 700  
23 tons number. And this is within your professional  
24 expertise. Were you doing the calculation for a  
25 client of your own, 700 tons is the number that

1       you would come up with?

2               MR. POWERS: I think the analysis really  
3       has to be much more specific if you want to come  
4       up with an accurate number. I don't pretend to  
5       say that the actual secondary ammonium nitrate and  
6       ammonium sulphate emissions will be 700 tons per  
7       year. I think that what we often do in the air  
8       quality field is we calculate potential to a myth.

9               What is the absolute potential? And I  
10      think that we would all agree that it is rare that  
11      a ton per year of limit is anywhere near it from  
12      the emission sources that we regulate. But you  
13      run your calculations based on potential to emit.

14              It is an overly simplistic analysis I  
15      think to go with the 700 tons. But I would  
16      caution then veering into an area where you're  
17      doing a complex modeling exercise and presenting  
18      as a finality that we have very little emissions.  
19      It's just I don't see that in the record. So I  
20      don't debate that there's a middle ground  
21      somewhere.

22              PRESIDING MEMBER GEESMAN: Thank you.

23              HEARING OFFICER GEFTER: Do you have  
24      anything else on air quality?

25              MR. MILLER: I had just one rebuttal

1 question to ask Dr. Heisler.

2 DIRECT EXAMINATION

3 BY MR. MILLER:

4 Q Dr. Heisler, the substance -- I'll start  
5 over. I don't want to characterize your  
6 testimony. When you did your work, could you just  
7 answer, without going into the mechanics of it  
8 again, did you account for the difference in the  
9 weights between ammonia and ammonium nitrate of  
10 4.7 to one?

11 A That was part of what was done in the  
12 calculation, yes.

13 MR. MILLER: I have nothing further.

14 HEARING OFFICER GEFTER: Do you have any  
15 questions of Dr. Heisler?

16 MR. BRIGGS: No.

17 HEARING OFFICER GEFTER: All right. So  
18 we're going to now move the exhibits into the  
19 record with respect to air quality. And if there  
20 are no objections parties will stipulate to the  
21 exhibits that were identified earlier this evening  
22 with respect to air quality. Okay.

23 MR. BRIGGS: Yes.

24 HEARING OFFICER GEFTER: Good.

25 MR. KRAMER: No objection.

1           HEARING OFFICER GEFTER: All the  
2           exhibits referred to earlier today are now  
3           received into the record. The topic of air  
4           quality is closed except for the revision of  
5           condition AQSC5 to include new ERC's. And also  
6           Staff is going to draft a new condition on cooling  
7           tower ammonia drift.

8           Anything else on air quality?

9           MR. MILLER: No, nothing further on air  
10          quality. I guess I would -- excuse me, I guess  
11          I'm being hailed here. Just a suggestion, the  
12          condition on drift might be appropriately added to  
13          AQSC9.

14          HEARING OFFICER GEFTER: All right.  
15          Well, this is something that the Applicant can  
16          talk to staff about.

17          MR. MILLER: Okay.

18          HEARING OFFICER GEFTER: And you'll  
19          present us with the post condition. Anything else  
20          on air quality?

21          MR. MILLER: No, not on air quality.

22          HEARING OFFICER GEFTER: Okay. We'll go  
23          off the record.

24          (Thereupon, at 8:50 p.m. the hearing was  
25          adjourned.)

## CERTIFICATE OF REPORTER

I, JAMES A. RAMOS, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Hearing; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in outcome of the said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 7th day of April, 2003.

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